

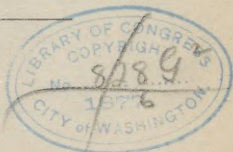
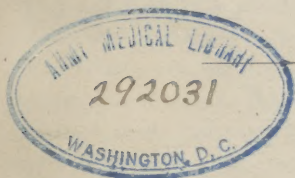
Kellogg, John Harvey
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THE
HOUSEHOLD MANUAL

— OF —

DOMESTIC HYGIENE, FOODS AND DRINKS, COMMON
DISEASES, ACCIDENTS AND EMERGENCIES,
AND USEFUL HINTS AND RECIPES.

With Many Other Interesting Topics.



PUBLISHED AT
THE OFFICE OF THE HEALTH REFORMER,
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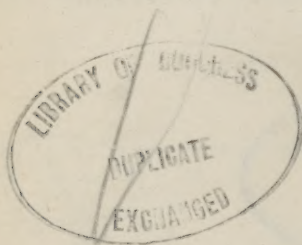
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PREFACE.

As indicated by the title page, this little work deals with quite a variety of topics. It is thought, however, that all the subjects considered will be found usefully suggestive to every household. The aim has been to make the work eminently practical in character, and to condense into the smallest space the greatest possible amount of information.

The suggestions and hints given under the head of "Domestic Hygiene," if thoroughly appreciated and applied, will obviate a very large proportion of the ills and suffering incident to domestic life.

The chapter on "Foods and Drinks" contains much which may be new to a majority of those who have never investigated the subject from the standpoint of health. It is not intended to be in any sense complete, the object being only to call attention to a few of the ways in which disease and premature death are occasioned by errors in diet. Those who are interested to pursue the subject further should send to this Office for other works which explain it more fully, the names of which are given in our book list at the close of the volume.

In "Simple Remedies for Common Diseases" are given directions for treating more than sixty common maladies with such remedies (with few exceptions) as are to be found in any household.

“Accidents and Emergencies” will be found to afford such information as may enable a person to be the means of saving many lives if it is carefully and promptly applied at the proper time.

The recipes for cooking have been tested by experienced cooks and others, and will be found to be a great improvement over those in ordinary use, as all admit upon making a fair trial. The miscellaneous recipes have been collected from numerous reliable sources, with much care, and it is hoped that all may find something among them that will be really a desideratum.

The two essays by Dr. R. T. Trall which form the concluding portion of the book are valuable and interesting. A table of contents of each will be found in immediate connection with it instead of being introduced into the index.

PUBLISHERS.



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DISEASES OF WOMEN, by R. T. Trall, M. D.

THE HYGIENIC SYSTEM, by R. T. Trall, M. D.

DOMESTIC HYGIENE.

STATE and National Health Boards and Committees certainly do excellent work for communities and nations; but the real influence which they exercise over the health of individuals is insignificant when compared with that which may be, and indeed is, exercised by the matrons of the various households which make up villages, cities, and nations. City authorities may exercise a rigid surveillance over all the avenues through which disease is known to enter; they may keep the public streets cleanly, introduce costly means of supplying water, and cause the removal beyond the suburbs of slaughter-houses, tanneries, soap-boiling establishments, and noisome chemical works; but if the seeds of death and disease are allowed to germinate and flourish in each separate dwelling, and around each fireside, what favorable results can be expected?

All reforms must begin at home, to be effective; and we would urge upon all parents the importance of careful attention to the simple suggestions which are herein offered, by means of which they may be able to save themselves and their families from numerous illnesses, with their attendant inconveniences, expense, and suffering,

and, probably, in many cases, from untimely death.

Ventilation.—From the first quick gasp of infancy to the last feeble sigh of old age, the prime necessity of life is air. Air is food for the lungs, as bread is food for the stomach. Millions more people die from want of lung food than from a deficiency of other aliment. The Creator has provided the necessary article in generous abundance, fresh, pure, and free to all. If we do not get enough, it is our own fault, for when we close our doors and windows the closest, this vitalizing, invigorating element is whizzing and howling close around outside, seeking to find an entrance.

People who nail up their windows, stop every crack and crevice in the walls, line the door casing with felt, and fix a patent thing under the door as a sort of air-trap to catch the occasional whiffs of pure air which might otherwise get in, are barricading themselves against their best friend. A man who should so studiously and deliberately deprive himself of the means of procuring ordinary food, would be pronounced a suicide. Is he any less a transgressor—though ignorantly so—who deprives himself and his family of a still greater necessity, pure air?

Every man produces five gallons of carbon dioxide, a deadly poison, every hour. This poison is so deadly that the amount produced and carried out of the body at each breath poisons, and renders unfit for breathing, three cubic feet of air.

An ordinary gas burner produces as much carbon di-oxide as six men, and poisons three hundred cubic feet of air a minute. A man poisons fifty cubic feet each minute.

Besides carbon di-oxide, the breath contains another poison even worse. It is the organic matter contained in the moisture of the breath. This it is which gives to the breath its foul odor, and to the air of a close room its peculiar fusty smell.

How to Ventilate.—The only way to get fresh air is to obtain it from out-of-doors, by exchanging the foul air within for pure air without.

How much fresh air do we need? Every man needs enough to dilute the poison which he exhales sufficiently to render it harmless. To effect this, a quantity of air 5,000 times as great as the amount of carbon di-oxide produced, is required. In other words, 5,000 gallons of pure air are necessary to render harmless one gallon of carbon di-oxide. A man produces a gallon of this poison every twelve minutes, or five gallons an hour; hence, he requires 5,000 gallons of pure air every twelve minutes, or 25,000 gallons each hour—more than 3,000 cubic feet.

HOW IS THIS AMOUNT OF AIR TO BE OBTAINED?—Hot air and cold air are like oil and water. The cold air sinks to the bottom and presses up the hot air. To ventilate well, then, there must be two openings; one at the bottom, and the other at the top. What! shall we open

the windows at top and bottom on a cold, wintry day? Certainly. Cold air is not poison. Plenty of air and a rousing fire are cheaper in the long run than foul air and less fire.

But will not cold air produce colds, and lung fevers, and pleurisies, and consumptions? People don't catch cold in open sleighs nor when walking in the wind. Draughts of cold air upon a small portion of the body only, will occasion cold; but there need be no draughts. Avoid them in this way:—

Make a strip of board, three or four inches wide, just the length of the window casing. Fit it beneath the lower sash. This makes an opening between the two sashes where they overlap. Here the air can enter, and being thrown upward toward the ceiling, it will be productive of no harm to any one.

Another way: Lower a window at the top on one side of the room, and on the opposite side raise another a little at the bottom. Place a screen of fine netting in front of each, and the room will be pretty well ventilated without draughts.

HOW MUCH SHALL THE WINDOW BE OPENED? Under ordinary circumstances, allow one inch inlet and outlet, in vertical measurement, for each occupant of a room.

The old-fashioned fire-place was a most efficient ventilator. It is a good omen that fire-places are again coming into use. No residence should be

built without one. The most fashionable parlors in the large cities are now heated by them.

If flues are used in ventilating rooms, it is absolutely necessary that the air in them should be heated several degrees higher than that in the rooms, to secure a draught. There should be two openings into the flue; one near the ceiling, and the other at the floor.

Never sleep in a room which is unventilated.

To Destroy Foul Odors.—Abundance of fresh air is the best deodorizer. There is no substitute for ventilation. Pure air washes away foul smells as water washes away dirt. One removes solid filth, the other gaseous filth. If the offensive body is movable, be sure to remove it. If not, apply something to destroy it. Several agents will effect this.

If it can be safely done, set fire to the foul mass; or, if this is undesirable, heat it almost to the burning point.

Apply very dry, finely pulverized earth. Clay is the best material. Finely powdered charcoal which has been freshly burned, is quite as good as earth. Dry coal or wood ashes are excellent.

Make a solution of permanganate of potash, dissolving one ounce in a quart of water. Add this to the offensive solid or fluid until it is colored like the solution. An excellent deodorizer. It is needed in every household. A supply of

the solution should be kept constantly on hand, ready for use.

Copperas dissolved in water in proportion of one pound to the gallon of water is cheaper, and may be used when large quantities are needed. Apply it freely.

Bromo-chloralum is a very good deodorizing agent, but is rather expensive.

Chlorine gas, chloride of lime, ozone, and numerous other agents, are effective when rightly used.

Cess-pools.—Drains, sewers, and cess-pools, connected with a house, are often sources of serious disease. The kitchen sink is not unfrequently the door through which the germs of disease silently creep into a household and develop into disease and death, the cause of which remains a mystery, and is attributed to the inscrutable dealings of Providence.

In the summer, draughts are produced in the room, which suck up the filthy gases which are formed in the cess-pool or sewer, through the drain-pipe—unless it is furnished with an efficient water-trap, which is not usually the case. In the winter, the gases of the cess-pool are naturally warmer than the air above, and so they rise and find their way into the house, filling it with invisible poison, which is breathed, and thus taken into the blood, by every occupant of the dwelling. Thousands of valuable lives are annually sacrificed in this way.

How shall this evil be remedied? In cities, the problem is a difficult one, unless sewers can be replaced by the dry-earth system. In the country and in small towns, it is easily cured thus:—

Make the cess-pool some little distance from the house. Place in communication with it a wooden ventilating flue sixteen or eighteen feet in height, and four to six inches square inside. This will carry off the foul gases under ordinary circumstances, but it will sometimes be found inefficient; hence, a water-trap should be formed in the drain-pipe, just beneath the sink, by bending the pipe so that it will retain constantly three or four inches of water.

A still better way is to connect the drain-pipe with the chimney or stove-pipe, by means of a pipe of suitable size. This will secure ventilation of the drain; and if the connecting pipe joins the drain-pipe just beneath the sink, the protection will be perfect. All joints should be airtight, and the outlet from the sink should be plugged tightly when there is no fire in stoves communicating with the chimney.

Another valuable precaution is this: Pour into the sink, at least once a week, a gallon of water in which a pound of copperas has been dissolved. A few crystals kept constantly in the sink could do no harm. It is very cheap when bought by the quantity.

A new cess-pool should be made at least once a year, or the old one should be thoroughly cleaned.

The Germs of Disease.—What are they ? They are little animals—animalculæ—and the seeds of microscopic plants. How do they make a person sick ? They are taken into the lungs or the stomach. Then they find their way into the blood. Here they develop and multiply to a remarkable extent, and with astonishing rapidity. Some kinds are very deadly ; others are much less so, and some again seem to be almost harmless.

If you wish to see some of the latter kind, shut yourself up in a darkened room on a sunny day. Make a little opening in the window curtain, and thus admit a pencil of light. As you look across it, you will notice multitudes of little specks, “motes, dancing in the sunbeam.” These are the little germs which will develop, under favorable circumstances, into plants and animals of microscopic proportions, but in numbers too vast to enumerate. These are the agents which cause bread to rise, malt and wine to ferment, and the housewife’s carefully hoarded canned fruit to “spoil.”

All kinds of putrid matter, whether of animal or vegetable origin, send out immense quantities of germs which are of a much more poisonous character than those just referred to. These latter are the exciting causes of such diseases as typhoid fever, ague, bilious fever, typhus fever, and cerebro-spinal meningitis.

Under the House.—Many families who wonder why “some of the children are sick all of

the time," can find the cause underneath the floor. Nearly all houses have cellars. Here are stored all sorts of things for winter use—dead things and live things, articles to eat and fuel to burn, old boxes and barrels, heaps of coal, bins of vegetables, etc., etc. The coal and wood are continually sending up foul gases and germs. Many of the vegetables undergo decay and add greatly to the production of disease elements.

Besides the cellar there is usually an open space under the other portions of the house, between the foundation walls. This space is large enough to admit chickens, dogs, cats, rats, even pigs, and other small animals, but not sufficiently large to allow room for clearing it. Here various small animals find a hiding-place, and often die. Being out of sight and reach, they are not discovered even when the stench of their decaying bodies becomes distinctly manifest.

All the foul gases engendered in these various ways pass upward into the house, filling every room, condensing in fetid moisture upon the walls, and poisoning all who breathe in the house. What shall be done?

Cellars under a house are rather prejudicial to health, even at best. As they are commonly used, they are very greatly so. If there must be cellars beneath the house, they should be large, light, and well ventilated. Every week at least the cellar windows should be opened wide to allow free change of air. A good way to ventilate a cellar is to extend from it a pipe to the kitchen

chimney. The draught in the chimney will carry away the gases which would otherwise find their way into the rooms above.

Cellars should be kept clear of decaying vegetables, wood, wet coal, and mold. The walls should be frequently white-washed, or washed with a strong solution of copperas. The importance of some of these simple measures cannot well be overestimated.

Houses should be built so high above the ground that the space beneath can be easily cleared every few months.

Sunshine.—In caves, mines, and other places which are excluded from the light, plants do not grow, or, at most, they attain only a sickly development. The same is true of animals. In the deep valleys among the Alps of Switzerland, the sun shines only a few hours each day. In consequence, the inhabitants suffer terribly from scrofula and other diseases indicative of poor nutrition. The women, almost without exception, are deformed by huge goiters, which hang pendant from their necks unless suspended by a sling. A considerable portion of the males are idiots. Higher up on the sides of the mountains, the inhabitants are remarkably hardy, and are well developed, physically and mentally. The only difference in their modes of life is the greater amount of sunshine higher up the mountain side. When the poor unfortunates below are carried up the mountain, they rapidly improve.

Throw open the blinds and draw aside the window curtains. Never mind if the carpets do fade a little sooner. The pale cheeks will acquire a deeper hue, and the sallow skins will become of a more healthy color.

A sitting-room ought to be on the east or south side of a house, so that sunlight will be plentiful. House plants will not thrive in a north room. Women and children, who live mostly in the house, thrive no better in such a situation than plants. Sleeping rooms should be aired and sunned every day.

House Plants in Sleeping Rooms.—It is a very popular error that house plants are injurious in sleeping rooms and sick rooms. It is commonly supposed that plants draw the vitality of the patient, or poison the atmosphere in some way. This is wholly an error, if we except a few of the more strongly scented plants which emit a somewhat poisonous odor, or which might in some cases be unpleasant to the senses of a nervous patient. Plants cannot draw vitality from animals. Indeed, they are the one great means which make human life possible; for if they did not purify the air, all animals would quickly perish.

Plants inhale carbon di-oxide during the day, and exhale oxygen. During the night, they inhale carbon di-oxide the same as in the daytime, but exhale a part of it again, along with the oxygen. They purify the air, then, during the night, but less than during the day.

A mouse and a growing plant can live together in an air-tight box. Alone, either one would die; together, they both thrive. Plants purify the air for human beings as well as for mice.

Plants also remove impurities from the air by means of the *ozone* which they produce, which is one of the most powerful disinfectants known. The laurel, hyacinth, mint, mignonette, lemon tree, and fever-few are among the best ozone-producing flowers.

The cheerful aspect which flowers give to a room, and the pleasant recreation which their care affords, are not the least of the advantages to be derived from them.

Beds and Bedding.—A cold, damp, musty bed has cost the world many a valuable life. The "spare bed" is a genuine terror to traveling ministers, and school teachers who board around. A night spent in one of them is a certain cause of cold, headache, sore lungs, sore muscles, and stiff joints the next day. Never sleep in a room which has been unused for weeks, unaired, unwarmed, and secluded from sunlight, until the bedding, at least, has been thoroughly aired and dried, and the air of the room thoroughly changed by ventilation. Never offer such a room for the accommodation of a guest without treating it in the same way, unless it is desired to make him sick.

Feather beds are very unhealthful. They not only undergo a slow decomposition themselves, thus evolving foul and poisonous gases, but they

absorb the fetid exhalations from the body which are thrown off during sleep. By constant absorption, the accumulation soon becomes very great, and the feather bed becomes a hot-bed of disease. Hair, cotton, straw, or husk mattresses are greatly superior to feathers from the standpoint of health.

Don't cling to the old feather bed because it is an heir-loom. The older it is, the worse it is. Only think of the amount of diseased germs which must be stowed away in a sack of feathers which has done service during a hundred years or more! Subject to all the accidents and emergencies of domestic life it has, perhaps, carried a half dozen patients through typhoid fever and pillowed the last months of the gradual dissolution of a consumptive, besides being in constant use the balance of the time.

Privies.—As ordinarily constructed and managed, these necessary institutions are most prolific sources of disease. The animal excretions which are left to accumulate in them undergo still further putrefactive changes, which result in the development of the most pestilential germs and gases. Here is where the terrible typhoid poison originates. Deep vaults should never be allowed under any circumstances.

The best way to manage a privy is this: Early in the spring fill up the old vault, if there is one, even with the surface. Raise the building a little. Have made at the tin shop a sufficient number of

pans of thick sheet iron. The pans should be about two feet square and two inches and a half deep. Each should be furnished with a long bail, and a strong handle at one side about a foot in length. In using these pans, fill each half full of fine, dry dirt—not sand—or ashes, and shove it into position, allowing the bail to fall back upon the handle behind. By the addition of a little dry dirt several times a day, all foul odors will be prevented. The contents of the pans ought to be removed every night in the warmest weather of summer, the pans being replaced with a fresh supply of dry earth. During cooler weather, if little used, the pans will require emptying but once a week, if they are kept well supplied with dry earth. The contents of the pans may be buried or removed to a proper place at a distance from any dwelling.

For convenience, it is found to be an excellent plan to hire a scavenger to attend to the pans at regular, stated times. Fifteen or twenty in a community can unite on the same plan, and thus make the expense very slight for each.

About the first of December, the pans may be removed and a shallow vault dug. The vault should not exceed two feet in depth, and it should not be tightly inclosed. This will allow the contents of the vault to freeze. They may be removed several times during the winter, and should be kept covered with dry dirt, which should be procured in sufficient quantity in the fall.

Bathing.—From the millions of little pores on the surface of the body there flows a ceaseless stream of impurities. As the moisture evaporates, these are left upon the skin. The requirements of health and cleanliness demand that these should be removed. Once a week, at least, the year round, the whole person should be thoroughly washed with soap and water.

A barrel of water is not required for an efficient bath. A pailful is an abundance. Even a pint will go a good ways toward making a person clean if judiciously applied. A simple air-bath is better than none.

Cold bathing is not recommended. Robust persons may stand it very well, but it is injurious to invalids, and to any one if long continued. The best temperature for most persons is about blood heat.

In the summer time, when perspiration is more free than in winter, the accumulation of dirt upon the skin is much more rapid, and a daily bath is required.

Are not baths weakening? The weakening effect of a simple application of a little water to the surface of the body is not one-tenth as great as that from carrying about constantly a load of dirt upon the skin which not only prevents the elimination of impurities from the blood, but is actually absorbed into the system again. A bath is refreshing, soothing, and strengthening if properly taken.

Poisonous Paper.—Many cases of poisoning, some of which were fatal, have been traced to the arsenic contained in several of the colors of wall-paper. The most dangerous color is green. It is almost impossible to find a green paper which does not contain arsenic. Green window curtains are especially dangerous. The green dust which can be rubbed off from them is deadly poison. In rolling and unrolling the curtain it is thrown into the air and is breathed. The same poison is brushed off the surface of arsenical wall-paper into the air by the rubbing of pictures, garments, etc., which come in contact with it.

It is very easy to test papers of this kind before buying, and it would be wise to always take this precaution. Take a piece of the paper and pour upon it strong aqua ammonia over a saucer. If there is any arsenic present, this will dissolve it. Collect the liquid in a vial or tube and drop in a crystal of nitrate of silver. If there is arsenic present, little yellow crystals will make their appearance about the nitrate of silver. Arsenical green, when washed with aqua ammonia, either changes to blue, or fades.

Poisonous Aniline Colors.—Red flannel, stockings, and hat linings, and the striped stockings which have recently become fashionable, have occasioned serious poisoning in numerous cases. The aniline dyes with which they are colored are used in connection with arsenic, which is not

removed by the manufacturers. They should be carefully avoided.

Cosmetics.—The various paints and other preparations which are sold by druggists as means of beautifying the complexion are most pernicious and poisonous articles. None of them can be safely used. We have seen cases of hopeless paralysis occasioned by their use.

Fresh air, sunshine, a wholesome diet, abundant exercise, and daily bathing are the best means of beautifying the complexion. A sallow skin is a pretty sure indication of a torpid liver or dyspepsia, or both. No amount of cosmetics can cure these.

House Cleaning.—The semi-annual house cleaning, although not a pleasant experience, is just as necessary as the original building of the house. Some important things are often overlooked in the general hurry and confusion.

The closets, garrets, clothes rooms, stairways, and similar places need thorough renovation as well as more conspicuous rooms. The steam and gases from the kitchen find their way into all parts of the house, and are absorbed by the porous walls, or condense upon the wood-work. If not removed, they become sources of disease. The spare bedroom and the parlor must not be neglected on account of having been little used, for the same reason.

Wood boxes are too often neglected until the rubbish at the bottom becomes exceedingly foul,

and occupies so much space that there is little room for anything else. Wet, souring, fermenting bark and chips, decaying apple cores, moldy leather, and similar elements which usually occupy a considerable portion of wood boxes, contribute largely to the production of many febrile diseases.

New wall-paper should never be put on over old. The fresh paste, by its moisture, causes the fermentation of the old paste and the production of foul gases from the colors of the paper and the impurities which have been absorbed. If the old paper contained arsenic, the danger is increased ten fold, as arseniureted hydrogen is formed, one of the most fatal gases known.

Cleansing Sick Rooms.—A room which has been long occupied by a person suffering from chronic disease, or by a fever patient, or a case of small-pox or other contagious disease, ought to be very thoroughly cleansed before being occupied by others. The means by which this may be most efficiently done are these:—

1. Take out the windows and give the greatest possible freedom to ventilation.

2. Remove the old paper from the walls and burn it. Wash the bare walls with a solution of copperas, and then apply whitewash to the ceiling. Cleanse the wood-work with a solution of chloride of lime or carbolic acid.

3. Remove carpets from the floor, the bedding from the beds, and every other kind of fabric in

the room, and thoroughly disinfect them before replacing.

4. If still more thorough disinfection is desired, remove from the room such furniture as will be injured by corrosive gases, close the windows tightly, and place in the center of the room a shallow stone or earthen vessel containing the following mixture: 4 oz. each of salt and black oxide of manganese, 3 fl. oz. of water, and $3\frac{1}{2}$ fl. oz. of sulphuric acid, or oil of vitriol. Mix the acid and the water first, let it cool, and then add it to the salt and oxide of manganese, which should be previously intimately mixed in the earthen vessel. Stir well with a stick and then close the room as tightly as possible, stopping up the crevices. Chlorine gas will be slowly formed by this means, and it will destroy whatever organic matter there may be in the room. It will even penetrate the plaster on the walls.

In two or three days the room should be opened and thoroughly ventilated.

Disinfecting Clothing.—Clothing which has been exposed to contamination by contagion, if of little value, should be destroyed. If more valuable, it may be disinfected in any one of several ways.

1. Heat in an oven as hot as possible without scorching, for an hour or two. A temperature of 250° will do no harm.

2. If the clothing is uncolored, or colored with mineral dyes, soak a few minutes in a solution of fresh chloride of lime. Afterward boil.

3. Soak for half an hour in boiling water to which carbolic acid has been added in proportion of an ounce to the gallon of water. Boil again in pure soft water, to remove the smell of the acid.

4. Expose for several hours in a close box to the fumes of burning sulphur. Air thoroughly afterward and wash.

Sick-Room Disinfection.—In such diseases as typhoid fever, dysentery, cholera, yellow fever, and diarrhea, the bowel discharges should be instantly disinfected and then removed as soon as possible. To do this readily and promptly, a strong solution of permanganate of potash or copperas should be kept constantly in the chamber vessel. Large vessels of water kept in the room and daily changed will absorb much of the gaseous poison. Carbolic acid, tar, chloride of lime, and most other gases are offensive to the patient and should not be used.

Keep Warm.—Fashionable dress totally disregards every consideration but novelty and display. Fashion loads the shoulders and chests of ladies and girls with warm shawls, cloaks, and furs, surrounds the abdomen with ten to fourteen thicknesses of cloth, and imprisons the hands in an enormous muff, but leaves the limbs and ankles exposed to chilling blasts almost without protection. The limbs actually need more clothing than any other part of the body. They should be clothed uniformly from the body to the ankles,

which should be clothed with warm woollen stockings and thick shoes or boots with high tops.

Flannel under-clothing should be worn during all but the hottest months of summer.

Squeezed to Death.—Not long ago a young lady went to bed without removing her corset, as she wished to grow small. When morning came, her friends found her a lifeless corpse. Thousands of young ladies are killing themselves in the same way. They may not die as suddenly, but they are dying as surely.

If any young lady who wears a corset could see the terrible havoc which it makes among her internal organs, she would be ready to desist from so foolish and harmful a practice. If the opportunity were afforded her, she would see her stomach squeezed out of shape and position so as to resemble much more a dog's than a human stomach. She would find her lungs compressed so that the blood could circulate with freedom through only a small portion, while the heart must struggle to its utmost to secure even a partial circulation. The large and small intestines she would find all jammed down into a heap in the lower part of the abdomen, where they do not belong, crowding upon the most delicate organs of her whole body, displacing and otherwise injuring them.

Any young woman who can deliberately commit all of these assaults against her physical frame

while knowing the consequences, is guilty of a crime different from that of the suicide only in degree.

Night Air.—A general prejudice exists in the world against night air. In part it is justifiable; but much of it is unfounded. There is only one kind of air in the night, and that is night air. The air in the house is night air as much as that out of doors. All the air we breathe comes from the outside. If the windows and doors are shut, it crowds in through the cracks and chinks. It makes very little odds, then, whether we breathe night air in-doors, or out of doors, except that it is rather purer in the latter situation. In many localities night air is purer than day air.

FOODS AND DRINKS.

A MAN is made of what he eats. Good food and drink make good blood; and good blood is manufactured into healthy brains, and strong bones and muscles. Poor food and improper drinks make poor and foul blood, which, in turn, is made into equally poor brains, bones, and muscles.

Those who pay no attention to the character of their food, but hurry into their stomachs indiscriminately, food which is good, bad, and indifferent, are sooner or later admonished by disease and suffering that the way of the transgressor is hard, and that nature's laws are inexorable.

America is known abroad as a nation of dyspeptics. This unfortunate condition is the result of the universal disregard of dietetic rules for which our countrymen are notorious. Attention to a few plain principles would save many thousands of lives annually. A large number of the most fatal acute diseases have their chief cause in errors of diet.

Poor Food.—Impoverished food is that which does not contain all the elements of which the body is built up in proper proportion. Perhaps the poorest article of food in common use in this country is fine-flour bread. The miller removes the very best and most nutritious portion of the wheat by the process of bolting; for the gluten which nourishes brain and muscle is deposited around the outside of the grain, just beneath the horny covering, or bran. In the center of the grain is found almost nothing but pure starch, which is so incapable of sustaining life that even a dog will starve to death in a short time if fed upon it exclusively.

Of such material nearly all American bread is made. Most other nations are wiser in this respect than we. The sturdy German eats his black bread made of the whole grain with a keen appetite, and it makes his muscles firm and his sinews strong in spite of the pernicious influence of his favorite lager beer.

Wheat-meal, or graham, bread is incomparably sweeter, richer, cheaper, and healthier than that

made of the superfine, bolted, impoverished article.

Condiments.—Every day a hundred thousand dyspeptics sigh and groan in consequence of condiments. Pepper, spice, salt, vinegar, mustard, and all kinds of fats belong to the list of dyspepsia-producing articles known as condiments. All the works on diet define a condiment as an article which adds nothing to the real nutritive value of food. It is simply something which is added to make food taste better. Whether the food does taste better or not does not depend upon the condiment, but upon the taste of the eater. If his taste is unperverted, he likes food best without condiments. If his taste is perverted, he may like almost any kind of unnatural combination. A Frenchman is as fond of assafetida in his food as an American is of salt, or an East Indian of curry powder.

Condiments are innutritious and irritating. They induce a heated condition of the system which is very unfavorable to health. They clog the liver, imposing upon it a great addition to its rightful task. Worst of all, they irritate the digestive organs, impairing their tone and deranging their function. A little practice soon accustoms a person to the disuse of condiments, and he learns to relish his food better without than with them.

Vegetable vs. Animal Food.—It is a mistaken opinion that flesh food is necessary to

maintain human life. This is abundantly proven by numerous facts which are drawn from the anatomy of man and the lower animals, human and comparative physiology, and the experience of the human race from Adam's time to our own.

Flesh food is not necessary to sustain either mental and physical vigor, or animal heat. It contains no nutrient element not found in vegetables. In fact, eating flesh is only taking vegetables at second hand, for all animals subsist upon vegetables.

On the other hand, the use of meat is unfavorable to longevity. Flesh food is stimulating. It contains venous blood, which is filled with such poisons as urea, uric acid, and cholesterin, with many others, which would have been removed by the kidneys and liver of the animal had it lived. It is also liable to contain the products and germs of disease, for few animals are perfectly healthy when killed, and many are in a condition of gross disease, being only hindered from dying a natural death by the intervention of the butcher's knife.

Animal food will sustain life; it will nourish the body; but it is not the best food. Science shows that it is not the natural food of man, and history testifies that the bravest and noblest nations of antiquity subsisted for ages without it.

Thousands of people have investigated this subject during the last twenty years, have become convinced that animal food was inferior to vegetable food, and have renounced the use of

the former with the most excellent results. Reader, investigate, and then try it for yourself.

Poisonous Water.—Whole communities have been stricken with disease at once by what seemed a very mysterious cause. Investigation traced the origin to the water supply. Further investigation proved that the original source was some sewer or privy which communicated with the water supply. This is known to be one of the greatest causes of typhoid fever.

The water of wells is often rendered poisonous by receiving the drainage of barnyards and vaults. Sometimes matter of this character will be conducted many feet under ground in a pervious soil, by percolation.

Water from a barnyard well or cistern should never be used. No vault or cess-pool should be within fifty feet of a well.

The Filthy Hog.—The hog is a scavenger by nature. His organization indicates it, for he has a regular system of sewers running all through his body and discharging on the inside of his fore legs, the express object of which is to convey away the filth with which his body teems.

The process of fattening hogs is one of disease. A fat hog is one which is grossly diseased. That this is the case is shown by the condition of the liver. The livers of all fat hogs are masses of disease. Every butcher will tell you that he finds not more than one liver in twenty among fat hogs which is not crowded with abscesses

filled with pus. Every organ of the body is diseased in consequence.

Tape-Worm.—This loathsome creature, which sometimes gets into a human stomach and intestines, and grows there to the enormous length of several rods, is communicated to man by eating pork. The occurrence of tape-worm is becoming much more frequent in this country than formerly, owing to the free use of pork.

Trichinæ.—Still more to be dreaded by pork-eaters are the terrible trichinæ, which are also communicated by the eating of pork. Each worm is so small that several hundred thousand of them may occupy a single cubic inch of pork. When taken into the body, a single worm produces ten young, which at once commence boring into the body in every direction, lodging at last in the muscles. The pain and general disturbance of the system is so great that few constitutions can survive the terrible ordeal. If life is not destroyed at once, the individual lingers along, a sufferer for life, his body filled with disgusting worms for which there is no remedy.

No cure for the disease has been discovered. About one hog in every ten is affected by the disease. No more than one in ten of the deaths from this cause are attributed to it, as the disease may appear like many others, resembling cholera, dysentery, typhoid fever, cerebro-spinal meningitis, and rheumatism. No pork is safe.

Milk from Stabled Cows.—Milk is not the best food, because it contains the impurities of the blood of the animal from which it is taken. If the animal's blood be pure, the milk is proportionately good; if it is impure, the milk must be likewise affected.

When cows are confined in a close stall, they breathe over and over the same foul air, which is always loaded with filthy vapors from their own excreta. These vapors enter the blood and poison every tissue and every secretion. The inhaled impurities make their appearance in the milk also, which thus becomes a means of excretion. If it is eaten, the filthy impurities of the stable are taken with it.

Catching Consumption.—French experimenters have ascertained that cows are very liable to consumption, and that the tubercle of this disease may be communicated either by eating the flesh or the milk of affected animals. This will account in part for some of the cases of "quick consumption;" for it is observed that when the disease is communicated in this way its progress is much more rapid than under other circumstances. When milk is used, the greatest care should be taken to obtain it from healthy animals.

Lead Water Pipes.—This is another of the numerous sources of poisoning to which we are exposed. If water passes through lead pipes, it is sure to dissolve some of the lead, which is a

dangerous poison when taken into the body, producing colic, paralysis, and a variety of other diseases. Hard water will be poisoned as well as soft water, though less readily. Never use lead pipe for conducting water to be used in cooking or for drinking. If the water is conducted from a main pipe in a short lead pipe, the danger may be averted by allowing the water to run, before using, long enough to remove from the pipe what has been standing in it, as this will contain many times as much lead as that which merely passes rapidly through.

The Use of Fruits.—Fruits are wholesome the year round, and should be more largely eaten. Ripe fruits are not productive of bowel diseases, as commonly supposed; fruit is one of the best remedies for dysentery. Fruits and nuts should be eaten with the meal, as a part of it.

Adulterated Sirups.—It is now becoming pretty generally known that the articles sold by grocers as “golden drip,” “silver drip,” etc., are largely spurious. It is difficult to find a pure or genuine article. Instead of being made of cane sugar, as they should be, they are mostly—sometimes wholly—composed of a kind of sugar made by boiling together starch, rags, sawdust or shavings, and sulphuric acid, or oil of vitriol.

So much of the acid is left in the sirup that it will sometimes corrode the cork of a jug. Its effect upon the human stomach is most mischievous.

In the manufacture, the sirup is boiled in iron pans. The acid dissolves a considerable quantity of the iron, so that it is also found in the sirup. It is very easy to prove its presence and thus prove the spurious character of the sirup. Into half a cup of strong tea, to which no milk has been added, put a teaspoonful of the sirup. If the tea becomes black, the sirup is bogus, no matter how earnestly the merchant may protest to the contrary. Reject it.

Cheap sugars are sometimes adulterated also. Test them in the same way.

Tea and Coffee.—Few that use these beverages are aware that they are daily poisoning themselves by so doing, but it is a fact. Tea contains a poison called theine; coffee contains the same under the name of caffeine. The amount of this poison contained in a few ounces of tea would suffice to kill a man.

By reason of the action of the vital organs against this poison, tea and coffee are stimulating, which is only another name for poisoning. Their effect upon the nerves is very injurious. They are a great cause of sleeplessness, nervousness, dyspepsia, and torpid livers. People sometimes even become tea-drunkards. The less of them that is used, the better.

Hard Water.—Water containing lime and other mineral matters is productive of several very painful diseases. Avoid its use. Soft water can always be obtained at certain times, and

preserved in cisterns. Such water is only fit for use after filtering. (See directions for making a filter.) Boiling hard water removes a portion of the lime. Filtration does not purify it.

Iced Water.—Copious draughts of iced water are very injurious. In the summer time especially, iced water is harmful on account of the sudden cooling of the internal organs which it induces. If drank at all, it should only be in small sips and very slowly.

Eating Between Meals.—The stomach requires rest as well as the brain or the muscles. If food is eaten at other times than at meals, it is kept constantly at work. From three to six hours are required to digest most articles of food; hence, if food is taken again within five or six hours after eating, the stomach is kept incessantly employed, and becomes exhausted. When the next meal is taken, it is unprepared to receive it, and indigestion with its myriad train of ills results. Late suppers are suicidal. Never eat within five hours of retiring.

Hasty Eating.—Americans are proverbial for hasty eating. The student swallows his food unmasticated, and hastens back to his books. The merchant bolts his meal to save time for business. The glutton eats as fast as ever he can to keep pace with his neighbors and get his full share.

It is not enough to fill the stomach with food. Digestion begins in the mouth; and unless the mouth does its share of the work, the stomach is

required to do a double portion. When the food is sent down into the stomach in lumps, the abused organ does its best to digest it, but fails, because it has no means for grinding food. The mill is in the mouth, and mastication, if done at all, must be done there. The gastric juice cannot act upon solid food, and allows it to go undigested. Fermentation ensues, and dyspepsia, dysentery, cholera morbus, and a dozen other diseases result.

Eight ounces of food, well masticated, will afford as much nourishment to the body as a pound hastily bolted.

Alcoholic Drinks.—No well man can habitually use wine, beer, brandy, or any other alcoholic drink, without becoming diseased. Ninety-nine sick people are killed by alcohol to one that is cured by it. It kills both well and sick people. It is good for nothing as a food, and worse than nothing as a medicine. Old people do not require it any more than young persons. Indeed, it is far more dangerous for old than young, because it endangers them to apoplexy.

Moderate drinking is a skillful trick of the old serpent to lead men to drunkard's graves.

Any quantity of alcohol intoxicates. Intoxication is poisoning. A little alcohol intoxicates a little; a larger quantity intoxicates a good deal. The moderate drinker, no matter how small his libations, only differs from the gutter toper in degree.

THE HYGIENIC SYSTEM.

THE "hygienic system," or "health reform," as it is sometimes called, is very little understood outside of the ranks of its adherents. The majority of people believe it to be a "horrid" doctrine which teaches all manner of absurdities, such as "starvation diet," "bran-bread diet," "cold-water cure," and similar notions.

Some people entertain a still more discreditable opinion of it. When President White, of Cornell University, was performing his duties as a member of a committee to examine the health commissioners of New York with reference to their fitness for their office, he asked one of them to define hygienic. "Hi-jin-nicks," said the commissioner, "is a bad smell arising from dirty water"!

All this popular prejudice and misunderstanding is found, by a little examination, to be founded in sheer ignorance of the real teachings of this system. Hygienic doctrines have the support of both science and common sense. Nearly every new discovery in physiology confirms the teachings of this system.

"Water cure," "hydropathy," and "vegetarianism" are epithets which are in no way applicable to the hygienic system. Those terms are justly applied to certain specialists, who are not proper representatives of health reformers, or hygienists in general. Like every other great reform, it

numbers among its professed adherents, extremists, fanatics, enthusiasts, quacks, tyros, and pretenders. These, also, must not be taken as representative hygienists. The public are often unable to discriminate between genuine reformers and pretenders, and the whole system is thus brought into disrepute.

Health reform requires a man to sacrifice nothing but those things which are of positive injury to him. It takes from him no real pleasure, and deprives him of no real good. It only corrects his bad habits and educates him in good ones. It shows him the depravity of his nature, and restores him to right relations with life. It enables him to appreciate pleasures of which he was formerly unconscious. It cleanses his body, frees his mind, unfetters his soul, and sharpens his senses.

To those to whom this subject is new, we would say, Investigate it candidly and thoroughly; then you will be prepared to judge of its merits.

HEALTH.

SOUND physical health is as rare as it is valuable; so rare, indeed, that a learned doctor in Buffalo declares that health is unnatural to man, disease being his normal condition. Not being ready to believe the race so hopelessly depraved as this, we are unwilling to accept the doctor's theory. Yet he has considerable grounds upon

which to base his argument. According to the annual reports of "vital statistics," three-fourths of the whole population are sick every year. Of twenty-eight persons sick, one dies. Disease, then, is certainly more common than health. The "statistics" referred to take no account of the thousand and one ailments that make life miserable, and are certainly great departures from the standard of health, though not reckoned as serious illnesses.

Health, rosy and robust, is the natural condition of the human family. Sin and sickness—the words are nearly synonymous—are both the result of transgression. Sin is the transgression of law—either moral or physical. Sickness is the penalty of physical transgression.

How can *I* be healthy? says the gouty man; and how *can* I enjoy health? says the petulant dyspeptic.

How did the gouty man come by his disease? He has filled his blood with irritating wines and stimulating food until his joints have become stiffened, enlarged, and inflamed. Would he recover, he must discard his port, and sherry, and champagne, and fare plainly.

How did the dyspeptic arrive at his sorry condition? He lived the life of an epicure, tickling his palate with savory viands made tempting by unwholesome condiments; or perhaps, more temperate, he only took his meals irregularly, and at unseasonable hours, or violated otherwise the laws which regulate digestion, thus wearing out

with ceaseless toil that faithful slave, the stomach. Would he have health, he must renounce his dainty tidbits, midnight feasts, and gormandizing. Plain, frugal, regular, and wholesome must be his diet.

Health may be retained, or, when lost, regained, by *obedience to the laws of life*.

Disease is only the penalty which is inflicted for the transgression of the laws of life.

Obey, and live; disobey, and die.

DRUGS KILL—NATURE CURES.

TWENTY years ago, when a man had a fever the doctors thought he had too much vitality—too much life—and so they bled him, and purged him, and poisoned him with calomel, and blue mass, and sundry other poisons, for the purpose of taking away from him a part of his vitality—his life—in other words, killing him a little. If a man was extraordinarily tough, he survived in spite of the killative influence of both disease and doctors; the doctors got the credit of having barely saved his life by their consummate skill, when the fact in the case was that his recovery was wholly due to his strength of constitution. If the patient happened to be less hardy, he died. Then the doctors and friends consoled themselves with the thought that they had done all they could, given all the medicines (drugs and poisons) they knew the names of, and wondered at the mysterious (?) dealings of Providence!

After a time a great doctor thought he had discovered that a fever was a *want* of vitality, and that bleeding and purging was what made so many fever patients die. He announced his discovery to the world, and the doctors stopped bleeding, and purging, and salivating, and began dosing their patients with brandy, wine, and other stimulants, with a view to increase their vitality by so doing.

The result remained the same, much to the astonishment of the savants of medical lore, who found no explanation of the difficulty except in the hypothesis that fevers had totally changed their character.

After a few years, another great doctor announced that brandy and milk was a sovereign remedy for fever, for more patients got well who took milk with their brandy than those who took the brandy alone.

Pretty soon another doctor found that water and brandy—water outside and inside, in the form of drink and baths—was a still better remedy.

Numerous physicians adopted the brandy-and-milk cure, found it superior to the brandy cure alone, and extolled it to the skies. Pretty soon an observing practitioner discovered that milk alone was a better remedy than milk and brandy, since a larger percentage of patients recovered under that mode of treatment than under the brandy system. "Milk Cure" for fever then attracted great attention for a time.

German physicians, experimenting with the brandy-water method, became convinced that this method was a little in advance of the milk-and-brandy mode, and finally discovered that *water alone* was still better than any of the other plans of treatment. Then came the announcement that "water cure" was the best remedy for fevers. And so, from bleeding, purging, depleting, and salivating, we have come to simple water. In former times, the mortality was fearful. Under the new treatment, it is very small. What makes the difference?

Under the old plan, a man was bled, physicked, and poisoned with mercury and other drugs, and was compelled to lie with parched lips, swollen tongue, and a burning skin—consumed by the fierce fever fire within, the hot blood rushing through his veins like molten lead, drying up the vital fluids and making his quick breath like the blast from a furnace—but no cooling draught to quench his torturing thirst, moisten his parched lips, and thin his thickened blood; no water to lave his throbbing brow or cool his burning skin; no pure, fresh, invigorating air to breathe—for an open window would be certain death!—and smothered under heavy blankets, quilts, and feather beds.

Is it any wonder that few patients could survive the ordeal of such a plan of treatment? Nature did her best to cure, art (unwittingly, perhaps) did its best to kill.

Under the stimulus of brandy, wine, and kin-

dred drugs, about the same number of patients died. What else could be expected when the call for drink was only answered by such fiery beverages as brandy, rum, and other alcoholic liquors?

Brandy and milk was better. Milk is food; brandy is poison. A pint of food and a pint of poison are certainly preferable to two pints of poison. Less poison, fewer deaths.

Brandy and water was better yet. Water to quench the consuming thirst and cool the feverish skin, with one-half as much poison and no bleeding—still less patients were killed. More patients recovered *in spite* of the poison.

Milk alone proved still better. Nutritious food and *no* poison ought to be better than equal quantities of food and poison. Even sour milk, or buttermilk, or even whey, was better than brandy. The majority recovered. Nature was neither aided nor hindered very much.

Water alone, within and without, in abundance, hot, cold, or tepid, to suit the patient's feelings, proved just the thing. Nature was not only not hindered, but was aided. The fever fire was quenched, and the skin was cooled. Fresh air and pure water were nature's best assistants. They did not *cure*, they only helped nature and gave her a chance to do her work. Nearly all the patients got well.

The same principles are true in other diseases. Nature's remedies are the best. Drugs are poi-

sons. They cannot cure *patients*. They cure one *disease* by producing another.

Do physicians generally know this? Yes; they must, for the most eminent medical authors teach the doctrine, and many eminent German practitioners are beginning to practice it. Why, then, don't our physicians generally treat their patients in accordance with the better way? We dislike to say it, but we fear that many are too indolent. It is so much easier to administer a dover's powder than a wet-sheet pack—so much more convenient to carry a pill-box than a bath-tub.

Every man should learn to be his own physician. Every woman ought to know how to treat herself and her children in all ordinary cases.

The best way of all is to learn to keep well by doing right; that is, obeying nature's laws.

Strange Indeed!—"You have lost your baby, I hear," said one gentleman to another. "Yes; poor little thing! it was only five months old. We did all we could for it. We had four doctors, blistered its head and feet, put mustard poultices all over it, gave it nine calomel powders, leeches its temples, had it bled, gave it all kinds of medicines, and yet, after a week's illness, it died!"

SIMPLE REMEDIES FOR COMMON DISEASES.

NINETY-NINE out of a hundred of all the cases of illness which are constantly occurring in nearly every family are of such a character that they can be treated by any intelligent mother quite as well as, or even better than, the doctor. Again, the necessary trouble of going for a physician for every trifling ailment, besides the useless expense in fees which it occasions, are weighty considerations. Important cases demand medical advice; but every parent ought to be sufficiently well informed to be able to attend promptly and efficiently to the great majority of the ailments to which all families are liable.

If children are properly clothed and fed, allowed plenty of exercise, fresh air, and sleep, they will be seldom ill. The same is equally true of grown people. Accidents, exposures, and indiscretions will occur, however, resulting in various ailments. If the simple directions given for treating some of the more common diseases are carefully followed, much trouble, expense, and suffering may be avoided. No drugs are recommended for internal use because the cases in which they are really needed are so exceptional-

ly rare that none but physicians should deal with them; the less the better, in any case. Drugs do not cure.

Colds.—Tommy, or Mary, or baby, or some other one of the children, or the family, has “caught a hard cold;” what shall we do? Do nothing, and let it wear off?

No; perhaps he will get well, may be his cold will become something worse.

Shall we give him ginger tea, red pepper, brandy sling, onion sirup, honey and lard, fat pork, castor-oil, licorice, hoarhound, molasses candy, boneset, catnip, mullen tea, or pennyroyal? or shall we apply a mustard plaster to his chest, a blister to the bottom of each foot, and fat pork with salt and pepper to his throat?

Do no such thing. Such trash put into his stomach, with such irritating applications outside would make a well person sick. Now do this:—

In the first place, prevent the cold, if possible, by beginning in season. Perhaps the feet have been wet, and are damp and cold. Pull off the shoes or boots and stockings, and put the feet into a pail of water as hot as can well be borne, after first wetting the head with cool water. After fifteen minutes soaking, pour a little cold water into the pail. Allow the feet to remain two or three minutes longer, then take out, wipe dry every part, between the toes and around the ankles, and then rub them until they glow with warmth. Put on dry, warm stockings, and send

the patient to bed for an hour, or all night if it is evening. Instead of waking up in the morning with a headache, a sore throat, and a voice like a cracked fiddle, he will be quite well.

If a person has really got a cold, and is sneezing, and wheezing, and coughing, and expectorating, more thorough measures must be taken.

1. Eat little or nothing for a day or two. The popular adage, "Stuff a cold and starve a fever," is without foundation. A cold is a fever—a *heat*, really, rather than a *cold*, if temperature be considered.

2. Rest. Sleep all that is possible. No time is lost in such a course. Timely rest may save serious illness.

3. Take some kind of hot bath, which will start the perspiration freely. Long sweating is debilitating, only start the action of the skin. The foot-bath combined with the sitz-bath, the wet-sheet pack, the vapor-bath, and the hot-air bath are alike suitable. These are severally described in this work. After the bath, go to bed.

Drink freely of water, the purer the better.

A day or two of such treatment will usually "break" the hardest cold, saving the patient several weeks of pain and annoyance, if not from chronic disease. Try it. The trouble is less than you think; and the results are splendid.

Frequent bathing in tepid water makes a person less liable to colds.

Sore Throat.—There are many remedies for sore throat, some of which are harmless, being simply worthless—like goose oil applied externally—while others are quite injurious. The remedy used by the Germans—and many sensible Americans—is the best. If it is a case of simple sore throat, make, alternately, hot and cold applications, according to directions given elsewhere. If there is fever, cool the skin with sponge baths. Keep the feet warm. If there are symptoms of diphtheria, apply ice in a bag to the outside of the neck, and give the patient little pieces of ice to swallow. Lemon juice applied to the pharynx with a swab is sometimes a good remedy.

Hoarseness.—All the sirups, expectorants, cough mixtures, anodynes, and inhalations ever invented or advertised will not cure hoarseness. They may sometimes destroy the sensibility of the nerves of the diseased part, and so relieve cough, but they cannot remove the disease. Honey, loaf sugar, and all such articles are very deceptive remedies. Cough lozenges and candy, troches, etc., are equally useless. They do not come in contact with the diseased surfaces, as many suppose. They pass directly down into the stomach, where they occasion much disturbance, disordering digestion, and so producing a disease really worse than the one they were intended to cure.

If the disease has not become chronic, it may

usually be relieved by bathing the throat and neck in cool water, applying heat and cold alternately, and wearing a wet bandage around the neck nights. If the difficulty is of long standing, a physician's care is needed.

Headache.—Pain in the head is caused either by too much or too little blood. If the pulse is high and the head hot, while the feet are cold, apply cold to the head and put the feet in a hot bath. A sitz-bath and foot-bath combined will be necessary in severe cases. If the cold application does not give speedy relief, apply hot fomentations for a half hour, unless relief is sooner obtained, renewing the application every four or five minutes. Apply a tepid compress last.

Sometimes headache is caused by undigested food in the stomach. In such cases a warm-water emetic is needed. If accompanied by cramp in the stomach, apply fomentations over that organ also. Sick headache nearly always requires hot applications.

Burns and Scalds.—Apply at once light cloths dipped in cool or tepid water, or immerse the part in water. When the pain is somewhat relieved, apply pure lard or sweet oil. One of the best preparations is sweet oil to which carbolic acid has been added in proportion of one part to twenty. It may be applied by means of a saturated cotton or linen cloth laid over the part. If the burn has not destroyed much of the skin, prompt relief will usually be obtained by

covering the part with the white of egg applied with a soft brush. Apply a second coat when the first dries. Deep burns should be poulticed after the pain has been somewhat relieved by the application of cool wet cloths; as they will be attended with sloughing and discharge of pus.

Alum water and carron oil (a mixture of lime water and linseed oil) are favorite remedies with some. (See "Accidents" for further information.)

Chilblains.—This troublesome affection, though seemingly insignificant, often makes existence almost a burden by its constant irritation. It is easily cured, but not by the application of any sort of salve, ointment, liniment, or quack nostrum, no matter how highly recommended.

Just before retiring, prepare two vessels for a foot-bath. Place in one, water as hot as can be borne, and in the other, very cold water. Place the feet first in the hot water for two minutes, then in the cold water for the same time. Alternate thus four or five times, merely dipping the feet in the cold water the last time, and then wiping them dry. Repeat this treatment every night until the cure is effected. Improvement will begin at once.

Wear thin cotton stockings inside the woolen ones, and avoid exposing the feet to severe cold until they are well. A general bath twice a week is necessary. (See article on freezing for preventive of chilblain.)

Pain.—Acute pain is usually due either to inflammation or neuralgia. Hot applications are nearly always the most grateful, and the most successful of any local remedy. Plasters, liniment, and leeches are seldom if ever useful. Blisters are wholly unnecessary, and are always harmful. The most judicious physicians have wholly discarded them. Sometimes cold applications are the most grateful and efficient. The patient's feelings will determine which is to be employed. The hot foot-bath, or the foot-bath and sitz-bath combined, is sometimes necessary in addition to local measures.

Faceache.—Pain in the face is generally of a neuralgiac character. Frequently it originates in a diseased tooth. Make hot applications in any of the several ways described in the article on "Hot Applications." Cold applications are occasionally best. The foot-bath, sitz-bath, and abstinence from food are useful auxiliaries of treatment. When due to constitutional causes, as the use of tea, coffee, tobacco, or liquor, or to an impoverished condition of the blood and general derangement of the nerves, the disease is very obstinate and requires constitutional treatment.

Toothache.—This painful affection is often closely connected with faceache. It may be due to a decayed or ulcerated tooth, or to disease of the dental nerve. Apply the same remedies as directed for faceache. In addition, apply half of a steamed fig (hot) to the diseased tooth. A bit

of cotton saturated with laudanum or creosote, and crowded into the cavity of a carious tooth, will often give speedy relief. The only proper and permanent remedy when the tooth is decayed, is to have it filled or extracted. It should be filled, if possible.

Earache.—Hot applications, or the prolonged hot douche, applied with the fountain syringe, will often give relief. A hot poultice, continually applied, and frequently changed, is a good remedy. Half a boiled or roasted onion, bound upon the ear, will sometimes give relief. No remedy is infallible. The hot foot-bath and sitz-bath are excellent remedies. If an abscess is forming in the outer ear, the pain will continue until it opens, or is lanced. A few drops of laudanum placed in the ear give relief in some cases, and can do no harm. A still better application is obtained by evaporating the alcohol from a teaspoonful of laudanum and mixing the residue with half a teaspoonful of sweet oil or glycerine. Incline the head and pour a few drops of this into the ear. Such applications give relief only by deadening the sensibility of the nerves and not by removing the cause of the difficulty. Hence, they should be employed, if at all, only in connection with other remedies.

Rheumatism.—Inflammatory rheumatism requires the attendance of an experienced person. The wandering pains from which many people

suffer, which are commonly called rheumatism, can be relieved by proper attention.

1. Avoid the use of irritating condiments, tea, coffee, tobacco, and alcoholic liquors, including wine, beer, etc. Avoid, also, gross food, and the use of food or drink containing saline matters. Be temperate in all things.

2. Dress warmly and uniformly. Silk or buckskin under-suits, worn next the cotton under-clothing, give great relief to many. Wear flannel the whole year.

3. Apply heat to the painful parts as in neuralgia. The hot-air and vapor-baths are good. Keep the skin clean. Exercise freely.

Colic.—The usual causes are indigestion and constipation. Administer a copious enema to secure a free passage from the bowels. Apply dry, hot cloths or hot fomentations over the abdomen. Percuss and knead the abdomen gently, to promote action of the bowels. Hot drinks do very little good, and usually as little harm. For an infant, fold a thick woolen blanket. Wet one end in as hot water as can be borne. Wring it so that it will not drip, and apply the wet end over the abdomen of the child, wrapping the remainder around its body. It is often surprising to mark the almost instantaneous relief which follows. The applications must be *hot*, not simply warm, and must be renewed every five or ten minutes until relief is obtained.

Nearly all abdominal pains may be relieved in the same way.

Convulsions.—The convulsions of children—commonly called spasms, or fits—are usually due either to worms or indigestion, unless they occur in the course of some acute disease. Place the child at once in a hot bath, disturbing it as little as possible. It will usually recover in a few minutes. When sufficiently recovered, administer an enema to free the bowels, and keep it perfectly quiet. Some advise the cold bath, and practice it with good success. The patient should be rubbed vigorously during the cold bath.

Epileptic convulsions require more than simple domestic treatment. The most that can be done for the patient during the fit is to prevent him from injuring himself or others. The lips and tongue are often severely bitten by the spasmodic action of the muscles of the jaws closing the teeth together upon them. This may be prevented by placing a piece of soft wood or other material between the teeth at the beginning of the fit. As the patient usually sleeps some time after the fit, the brief interval of consciousness which immediately follows it should be occupied in getting him into a comfortable position.

Hysterics.—This peculiar disease is most common in women, though sometimes observed in men. It is a real disease, and should be treated as such. The symptoms are almost as various

as the cases. It may simulate any disease. Place the patient upon a sofa, beside which a large vessel is placed. Hold the head of the patient over the vessel, and pour cold water upon it from a pitcher held a few feet above. Apply at the same time cold to the chest and spine, and hot bricks or bottles to the feet. This treatment may be continued for an hour or two without injury if the patient does not recover sooner. Speedy relief is usually secured. If the patient becomes quite chilly, apply warm cloths to the chest and shoulders.

Apoplexy.—If a person falls suddenly and is found with a full pulse, throbbing temples, flushed face, and breathing hard, he has apoplexy. Loosen every constriction about the throat at once, elevate the head, secure fresh air, bare the chest, and pour cold water upon the head. See that the extremities are warm. Call a physician as soon as possible. Do not bleed, nor give brandy, ammonia, nor any other stimulant. Apoplectic convulsions are quite rare. They generally occur in sedentary people of full habit, in advanced life.

Fainting.—When a person faints, the heart nearly ceases its action, the action of the lungs is nearly or quite suspended, the face becomes pale, and partial or complete unconsciousness ensues. If the person has fallen, do not elevate the head, but be careful to keep it as low as, or lower than, the rest of the body. If the patient is sitting in

a chair, step behind him, grasp the chair at the sides, and carefully tip it back until the head touches the floor. This alone will suffice in many cases. If the patient does not immediately revive, loosen the clothing about the neck, chest, and abdomen; sprinkle cold water in the face; slap the surface of the body with the hand or a slipper; apply an ammonia bottle, camphor, or any other pungent odor to the nostrils; secure abundant cool, fresh air, and use artificial respiration. If the patient can swallow, give very hot or very cold drinks.

A person who is subject to syncope should lie down at once when he first feels faint.

Croup.—If the child can speak aloud, the disease is of the spasmodic variety, and he will probably recover with a little attention; but if he can only whisper, and the disease has come on somewhat gradually, it is a much more serious variety—true croup—and a physician should be called at once.

Apply, alternately, hot and cold cloths to the throat and neck for a half hour, then apply cold continuously for half an hour, then foment again. Give a hot bath, and keep the limbs and extremities warm. Give no emetics, expectorants, stimulants, nor anodynes; all are harmful. Goose oil on the outside does no more good than ipecac inside. Give the child an abundance of fresh air. If the case is one of true croup, the inhalation of steam is one of the best remedies.

Measles.—Ordinary cases require little more than care and good nursing. The comfort of the patient is greatly increased by frequent tepid sponge-baths or packs. If the irruption does not appear promptly, or is repelled, put the patient into a hot pack, with a woollen sheet, for thirty minutes. Keep the head constantly wet with cool water, and bathe the face every few minutes when there is considerable fever. If the throat is sore, give treatment for sore throat as already described. Give the patient abundance of fresh air, but do not expose him to draughts. The diet should be as simple as possible, and very light. Slings, teas, sirups, and other medicinal agents are not required in this disease.

Scarlet Fever.—This disease may be treated essentially in the same manner as measles. The sponge-bath should be administered several times a day. Keep the bowels free by enemata.

Fevers.—Simple fevers may be treated in accordance with the directions for measles and scarlet fever. If complications occur, as pleurisy, lung fever, or other affections, a physician should be consulted.

Mumps.—This common affection needs little more than careful nursing. A spare diet, rest, and a daily warm bath facilitate recovery. If the diseased parts are very painful, treat as for sore throat. Keep the feet warm. If the breasts or testicles become inflamed, apply ice or alternate hot and cold cloths.

Whooping Cough.—No method of treatment will *cure* this disease. The patient gets well of himself in due time in ordinary cases, if he is not dosed with sickening, poisonous drugs, teas, sirups, expectorants, cough mixtures, and emetics. Good care, plenty of fresh air, a warm bath three or four times a week, and a plain, nourishing diet are the best means to secure a speedy recovery.

Worms.—Various kinds of worms infest the human body. Children are particularly liable to them. For the small worms which are found in the rectum, perfect cleanliness, regularity of the bowels, daily enemas of salt water, and anointing the anus with sweet oil are the best remedies. Indigestion and constipation are the chief causes.

Tape-worm and the large round worm require more energetic measures of treatment. For the first, the best remedy known is the seed of the common pumpkin. Take two ounces of *fresh seeds*, remove the shells, and beat them to a paste with an equal quantity of finely pulverized white sugar. Add a little milk or water, and take at one dose after fasting twenty-four hours. After three hours, take a tablespoonful of castor oil. If this does not dislodge the worm, there probably is none. Many people imagine they have tape-worm when they have not. For a child, the dose should be about one-half that for an adult. The fluid extract of the seeds can be obtained at the stores, the dose of which is half a fluid ounce.

For the round worms, worm seed, *chenopodium*,

is one of the best remedies. To a child two or three years old give half a dram of the seed in sirup or honey, night and morning, for three or four days in succession. After the last dose, give a teaspoonful of castor oil. Five or ten drops of the oil may be given with sugar in place of the seed.

Constipation.—Torpidity of the large intestine is a condition very common among sedentary people, especially women. It is the result, in part, of eating fine-flour bread and irritating condiments. One of the greatest causes—the chief, perhaps—is neglect to attend promptly to the calls of nature. When the feces are retained in the rectum, they become hard and dry through the absorption of their fluid portion. Thus a considerable part of this foul matter is taken into the system, permeating every fluid and tainting every tissue. The dry, hard residue becomes packed in the intestine, and makes defecation difficult, and is productive of several serious diseases of the bowels and other abdominal organs.

Nothing could be more injurious than the use of purgatives as remedies for this difficulty. No matter under what form or name they are taken, they always aggravate the disease in the end, though they seem to give temporary relief. Besides, these “aperients,” “laxatives,” “purgative pellets,” and “cathartics” are the most potent causes of dyspepsia. To cure the difficulty do this:—

1. Exercise plentifully and regularly in the open air.

2. Eat no bolted flour. Instead, eat wheat meal or graham flour, oatmeal, rye, barley, crushed wheat, etc. Eat plenty of fruit, sparingly of milk, sugar, and condiments. Discard hot drinks at meals. Knead and percuss the abdomen gently for half an hour each day, or five minutes at a time, and several times a day. By regularity in habits, accustom the bowels to move at a certain hour each day. Secure an action of the bowels at least once each day, if possible, but do not resort to the continued use of the enema to effect it. Drink a glass of cold water half an hour before breakfast, if it does not disagree with the stomach.

Piles.—This malady is simply a result of the preceding one. It usually disappears when its cause is removed. Sometimes, however, the tumors which are formed have to be excised. Ointments seldom do any good. The numerous “infallible cures” advertised, are frauds. Cool bathing of the parts, cleanliness, and the injection of cool water are among the best remedies.

Cold Feet.—Cold feet are due to deficient circulation. Administer the alternate hot-and-cold foot-bath as directed for chilblains, several times a day, if possible; at least, twice a day. Wear large, thick boots or shoes, and thick woolen stockings. Keep the feet dry. Exercise. Allow no constriction about the limbs, as garters

or elasties. Clothe the upper portions of the limbs warmly. Do not wear rubbers except for a little while at a time when necessary. Electric or galvanic soles are of no use whatever. The feet should be kept perfectly clean, and the stockings should be changed every day, being allowed to air one day, when they may be worn again. Three changes a week are none too many for cleanliness and warmth. Cork soles are useful.

Heart-burn.—This unpleasant affection has nothing to do with the heart. It is the result of fermentation of the food, which produces irritating acids. These are thrown up into the mouth, producing a burning sensation. A few sips of hot or cold water will commonly give relief.

Sometimes a warm-water emetic is required. Soda and magnesia, which are so often used, are productive of a vast amount of mischief. They never cure, but increase the real disease, and sometimes cause fatal injury to the stomach and intestines.

Crick in the Back.—This curious malady is sometimes relieved as quickly as produced, by stretching the back by bending backward across a log or fence. Hot fomentations, with vigorous rubbing, usually give relief quite readily.

Stitch in the Side.—This difficulty is of the same character as the preceding. Hot applications usually give prompt relief. A tight flannel bandage should be worn about the trunk after the fomentation has been given.

Lumbago.—Alternate hot and cold applications followed by thorough rubbing and percussion are the best local applications. Systemic treatment and attention to the general health are also required.

Biliousness.—Every spring the regular doctors, and the quack doctors, and all the drug fraternity reap a rich harvest from the numerous multitudes who seek to be cured of biliousness by purgatives, alteratives, “blood purifiers” and “anti-bilious pills.” This is one of the great popular delusions upon which charlatans and druggists fatten. The ill feelings which are interpreted to mean too much bile, really mean, too much fat pork, too much sugar, too much grease, too much mince pie, too much cake and preserves, too much fried sausage; in fact, too much of all kinds of food, whether good or bad. April and May bring the penalty of the transgressions of the winter months. Flagrant outrages against nature in the matter of food and drink are often seemingly borne with impunity during the cold months; but if the same line of conduct is extended into the warmer months, all the symptoms of “biliousness” appear.

The proper cure for “biliousness” is, first, Abstinence for a day or two until nature can get rid of a little of the grossness which clogs her machinery; second, Avoidance of the cause; third, A few packs, fomentations over the liver, and the daily dry-hand rub, with a wholesome diet.

Lemons and other acid fruit seem to have a favorable influence upon this condition of the system.

Bitters are filthy compounds of various nauseous drugs and poisons, and bad whisky. *All* of them contain alcohol. "Temperance Bitters" and "Vinegar Bitters" are no exceptions. Some contain more alcohol and fusel-oil than brandy, gin, or rum. The various "blood tonics," "purifiers," "invigorators," etc., are of the same character. Their manufacturers are deserving of a place in the deepest part of the bottomless pit; for they lay snares for the unwary, making drunkards of the best and most promising men and youth. Their pretensions are all falsehoods, and their testimonials are either fraudulent or the result of bribery. Can bitters purify the blood? Never. As well talk of cleansing a delicate fabric with slime from a cess-pool.

Roots and herbs belong in the same category with the rest. They are not so harmful, however, though equally useless.

Cramps.—Relief is given by the hot or cold douche, hot fomentations, rubbing with cold water, and by pressing the affected muscle against some hard body, or grasping it firmly with the hand. Cramp in the stomach may require an emetic of warm water, with a hot sitz-bath and foot-bath.

Palpitation of the Heart.—Indigestion is the usual cause. It will cease when the cause is

removed. It need not be a cause of alarm in ordinary cases. If the patient has had rheumatism he should have his heart examined by a physician.

Indigestion.—Proper food, eaten in proper quantity, and at the proper times, ought to be properly digested. In rare cases, only, it may not be. When it is discovered that an article of food is really injurious to digestion, discard it at once. Eat few kinds at a meal. Avoid eating fruits and vegetables together. Do not drink at meals. Eat slowly. Eat mostly dry food. Do not sleep soon after eating. If the stomach is slow in its action, hot fomentations and gentle kneading soon after eating will promote digestion. Salt and other condiments are often the cause of indigestion.

Sometimes oatmeal gruel, eaten with dry crackers, will be retained and digested when nothing else will be. Other cases will not tolerate any kind of farinaceous food.

A young infant which is for any reason deprived of its natural food, and rejects everything else, will thrive upon a mixture of raw white of egg in water—the white of one egg to a half pint of tepid water. The water should not be hot enough to coagulate the egg. Thoroughly mix, and feed with a spoon.

Softening of the Brain.—So-called softening of the brain is not softening of the brain at all. It is simply congestion of the brain from

bad food, bad air, late hours, dissipation, lack of exercise, and sundry other causes. Healthy food, a daily bath, abundant sleep, and plenty of exercise in the open air, will cure nearly every case in a short time.

Consumption.—Is consumption curable? It is, if taken in time. The following hints, if carefully followed, will arrest the disease in its early stages:—

1. Avoid all the causes of the disease, chief among which are breathing air which has been previously breathed, sedentary habits, late hours, and exposure to extremes of temperature.

2. Live in the open air at least seven hours a day. Exercise sufficiently to produce moderate fatigue, but not exhaustion. Horseback riding and walking are good exercises.

3. Fill the lungs to their utmost capacity several times in succession, every hour of the day at least; and cultivate the habit of deep breathing. Do not strain the lungs by holding the breath long. Keep the shoulders well thrown back.

4. Avoid all kinds of stimulants and stimulating food. Eat the most nourishing kinds of food. The chance for recovery largely depends upon the amount of nutriment which can be well digested and assimilated.

5. Take a thorough tepid sponge-bath, followed by a dry-hand rub, three times a week. The whole body should be thoroughly rubbed with the dry hand each morning.

6. Wear flannel the year round; thick in winter, thin in summer. A silk under-suit is an excellent protective.

7. Avoid every form of cough sirup, balsam, cough mixtures, lozenges, expectorants, etc., etc., no matter how strongly recommended. Cod-liver oil, fat pork, bullock's blood, and similar remedies are as useless as absurd and disgusting.

Be sure to begin in season. A few months' delay has often sacrificed the last chance. "Throw physic to the dogs," obey the laws of nature, and trust in nature's God.

Vomiting.—If the patient evidently has something in his stomach which ought not to be there, as indigested food, or something obnoxious which has been swallowed, administer a warm-water emetic to assist in the removal of the cause of the difficulty. If there is no evidence of anything in the stomach which needs expulsion, apply either very cold or very hot cloths over the stomach, place the feet in hot water, and give sips of either *hot* or cold water, or little bits of ice to swallow. The attempt should not be made to check the vomiting unless it is clear that the stomach has been freed from its irritating contents, if this was the cause which induced it at first.

Cough.—Coughing, like vomiting, should be encouraged rather than restrained when there is anything which needs expulsion in that manner. Many consumptives have been suffocated by the

sudden stopping of a cough which was merely an effort of nature to get rid of foul matter in the lungs. If there is no cause for the cough but irritation in the throat, it may be cured, in most cases, by the application of the wet bandage. Wear night and day, and change frequently. If the cough seems to have no sufficient cause, it may be concluded that it is of a purely nervous character. The force of will power is the best remedy. Resolve not to cough, engage the attention with something else, and forget it. This method will sometimes succeed even when there is a little irritation present. Continuous coughing will produce irritation of itself. Frequent sips of cold water, and gargling cold water or a mixture of water and lemon juice, will often relieve a cough when it is due to irritation of the upper part of the windpipe. Wearing the wet bandage about the throat is an excellent remedy.

Do not eat honey, lozenges, loaf sugar, licorice, hoarhound, cough candy, or anything of the kind. They are worthless as remedies, and do the stomach a vast deal of damage.

Hiccough (hickup).—This troublesome affection is usually caused by a disordered stomach. Get the stomach in good condition, and it will disappear. A few sips of cold water will often relieve it. Perhaps the best remedy is holding the breath and fixing the attention intently upon some object.

Sneezing.—When suddenly seized with a desire to sneeze, place the finger upon the upper lip and press hard. Rubbing the nose vigorously will also suppress the paroxysm when it is desirable to do so. When the affection is caused by disease of the nasal cavity, it will not be so easily controlled. The inhalation of steam, and the warm or cold nasal douche, or gently drawing water into the nose, will frequently give material relief.

Bad Breath.—The chief causes are catarrh, decayed teeth, foul teeth, disordered stomach, and constipation. The remedy is to remove the cause. If there are foul and decaying accumulations in the nose, remove them by syringing the nose with a weak solution of permanganate of potash, common salt, or tepid water. Simply snuffing the fluid gently into the nose is quite effective. The fluid should not be thrown violently into the nose, as injury may result therefrom.

Decayed teeth should be either filled or drawn; their presence in the mouth is not only a cause of offense, but is productive of disease of the stomach, besides being a source of impurities which find their way into the blood through the lungs.

Uncleanly teeth are quite certain to decay sooner than those which are kept free from impurities. If the food which adheres to the teeth and lodges between them is allowed to remain,

it speedily undergoes putrefaction and becomes very offensive. The teeth should be cleansed with a brush and pure water after each meal, and soon after rising in the morning. Once a day, at least, they should be thoroughly brushed with fine soap and pulverized chalk. Artificial teeth need especial attention. They should be daily washed with fine soap and a solution of carbolic acid and water, in proportion of a teaspoonful of the acid to a half pint of soft water. Shake well before using. Do not wear artificial teeth during the night.

When disorder of the stomach is the cause, it must be cured, to purify the breath.

If the contents of the bowels are retained, instead of being promptly voided, their fluid portion will be absorbed into the blood with all their noxious and disgusting properties. The characteristic odor can be easily detected in the breath of persons whose bowels are constipated or irregular. Few things are more offensive than the breath of a costive child.

The proper remedies for foul breath from this cause are pointed out under the head, "Constipation." No amount of good looks can atone for a foul breath. Cleanliness and wholesome diet are all that are necessary to remove it. It is a very disgusting thought that the breath may contain what ought to have been voided from the bowels some time before.

Sleeplessness.—Eat an early and light supper of easily digested food; or, better, eat no

supper at all. Do not engage in exciting conversation or amusements during the evening. At an early hour prepare to retire, determined to sleep. Just before going to bed, soak the feet for ten minutes in a pail of hot water. Cool the water a little just before taking them out. This will relieve the brain of a little of its surplus blood. Go to bed at peace with all the world, close the eyes, and fix the mind steadily upon some familiar object until sleep comes. Don't allow the mind to wander if possible to prevent it. If unsuccessful, in addition to the above have hot wet cloths applied to the head after going to bed. A dripping sheet bath just before retiring sometimes affords excellent results. Gently rubbing the temples with the hand, and rubbing the spine from above downward and the feet and limbs in the same direction have a very soothing effect. The warm full-bath is an excellent soporific.

Chafing.—Fleshy persons and children are often seriously troubled by chafing in hot weather. Daily cleansing of the affected parts with cool water and fine soap, and local tepid bathing, repeated several times a day, will prove the most efficient remedies. Anointing the parts with sweet cream or a little unsalted butter, and applying dry, powdered starch, are useful measures. Cleanliness is the most important remedy.

Chapped Hands, Feet, and Lips.—Wet, cold, and dirt are the chief causes. The use of

hard soap, and imperfectly drying the hands before exposure to cold are the exciting causes of chapped hands in most cases. To cure, keep them scrupulously clean. Wash them with castile soap and soft water. After wiping them nearly dry, rub them with finely powdered starch.

Washing the hands with water to which a handful of bran or corn meal has been added, is a good remedy.

Another remedy: After thorough washing and drying, at night, apply glycerine, adding a few drops of soft water, and rubbing in well. Wear gloves during the night.

Sweet cream is another common remedy. Honey is warmly recommended by some. The wet bandage is one of the best of all.

The same remedies are to be used for the lips and feet as for the hands. When fissures or cracks occur, keep the edges together by means of adhesive plaster.

Ulcers.—Old ulcers on various parts of the body are frequently very offensive as well as painful. To remove the odor emitted by the discharges, wash them thoroughly twice a day in a weak solution of carbolic acid or permanganate of potash. The application will also do something toward healing it. The water-dressing, and a strict diet are the best remedial agents.

Canker.—The small white ulcers which sometimes occur in the mouths of both children and adults are commonly known by this name, which

really belongs to a much more serious affliction. They indicate derangement of the stomach. The proper remedies are, improvement of the digestion, washing the mouth frequently with cold water, and touching the cankers with nitric acid, lunar caustic, or some other caustic application. Various astringent washes are used with some benefit.

Stammering.—Stammering is a real disease. It is sometimes induced, by imitation of others, in those who have no natural impediment of speech. It is rather difficult to cure, but perseverance and firmness will master it. Speak very slowly and deliberately, uttering no sound until the vocal organs are well under control. Open the mouth widely in speaking, speak loudly, and breathe deeply. One of the causes of stammering is attempting to speak with the lungs only partially filled. Stop speaking instantly when the slightest embarrassment is felt, and keep the lungs well filled.

Dandruff.—Cleanse the scalp daily with pure soft water and fine soap, and brush it with a soft brush. Do not use any of the patent nostrums advertised.

Sore Eyes.—Ordinary inflammation of the eyes is greatly relieved by laying upon them one or two thicknesses of linen cloth wet in tepid water. Smarting of the eyes when reading will usually be relieved by moistening them often

with water. Never use eye-water or caustic unless under the advice of a skillful oculist.

Nearsightedness.—If the eyes are near-sighted, they should be at once provided with suitable glasses, or they will suffer injury. The glasses should be adapted to the eye by an experienced oculist.

Farsightedness.—Like the preceding, this disease needs immediate attention, although less injury will result from some neglect in this case.

Baldness.—Cut the hair short, and bathe the head twice a day in cool water, adding considerable friction with a brush of medium stiffness. Keep the feet warm, and maintain good digestion. If the hair follicles are not destroyed, the hair will grow again; otherwise it will not. The various lotions sold for this purpose are poisonous, and produce diseases which are sometimes fatal.

Itch.—The disease is caused by a parasite which burrows under the skin. The object of treatment is to kill the insect. It is perhaps possible to do this by means of water alone; but as the only applications necessary are made to the skin only, no harm can result from the careful use of more speedy and effective remedies. Sulphur is the most reliable remedy. Take two ounces of lard, one ounce of sulphur, and one-eighth ounce of powdered sal ammoniac. Mix well and apply at night after thoroughly washing the affected parts in strong soap-suds. Al-

low the ointment to remain on over night. Wash it off thoroughly in the morning and put on clean clothes. Repeat the same treatment three or four times in succession. An ointment of storax and lard, one part of the former to four of the latter, is quite efficient. Perfect cleanliness is essential to successful treatment. The application of oil and lard alone is said to cure by half a dozen applications. Mercurial preparations should be avoided, as they sometimes poison the system.

Lice.—Animal parasites of various kinds which infest the body abound only when their presence is encouraged by filth. They usually disappear very quickly when absolute cleanliness is preserved. If they do not at once vanish, the application of an ointment made of one part of Scotch snuff to two of lard will speedily destroy them. This ointment is quite poisonous, and should be quickly removed after thorough application.

Warts.—If the wart is small, it may be cured by touching it with the end of a stick which has been dipped in strong acetic acid. The application should be made several times a day until it is destroyed. If large and old, apply nitric acid in the same way. Lunar caustic and caustic potash may also be used.

Corns.—Cease to wear tight boots, shoes, or stockings. Soak the feet for half an hour in hot water and soft soap. Repeat this treatment un-

til the corn is soft, then remove it. The application of acetic acid, muriatic acid, nitric acid, or almost any caustic, will effect a cure. Wearing a piece of buckskin with an opening through it just the size of the corn, keeping the buckskin saturated with oil, will give great relief by removing pressure from the tender part.

Bunions.—These originate in the same way as corns, and require somewhat similar treatment. Soaking the feet in hot water when they are inflamed, and bathing with cool water at other times, gives great relief. If there is much thickening of the skin, apply a caustic, as nitrate of silver, or lunar caustic. When the black surface comes off, apply the caustic again. Wearing a piece of soft buckskin, as directed for corns, to prevent pressure, is a useful remedy.

Boils.—The application of heat and cold, alternately, will sometimes disperse a boil in the early stage. When it becomes painful, apply hot fomentations frequently, with the wet compress during the intervals, or apply continuously a soft poultice. The wet compress covered with oil silk has the same effect as the poultice. The kind of poultice is quite immaterial, if it be unirritating, for its only valuable properties are warmth and moisture.

When the boil is ripe, that is, when a little white vesicle appears near the surface, its cure may be hastened by lancing with a sharp knife. The discharge may be encouraged by gentle pres-

sure; but squeezing boils is a very harmful process, and greatly retards their cure. If they do not discharge freely after opening, poultice or apply fomentations. Applications for the treatment of boils should be made to the surrounding tissues as well as to the boil itself, to be effective.

A carbuncle is simply a large boil. A sty is a small one upon the eyelid. Treatment for each is the same as for ordinary boils.

It is a mistaken notion that the purulent matters discharged from boils are concentrated impurities which previously existed in the blood. The pus itself is made up of the white blood corpuscles, the most precious part of the blood. The discharge contains impurities, but most of them are the result of the death of the tissues which have suffered in the inflammation. It is yet an undeniable fact that many persons experience an improvement in health after having several boils, whatever may be the explanation. The contents of a boil are very poisonous to the system when absorbed into the blood.

Felon.—The real disease is an abscess formed beneath the periosteum, or skin of the bone. It may sometimes be dispersed by the application of turpentine or other strong irritants, or by holding the finger in strong lye as hot as can be borne for half an hour, several times a day. Keeping the hand constantly in ice-cold water gives great relief, and sometimes prevents the further progress of the disease if employed in

time. Relief is also afforded by the cold douche, arm-bath, and wearing the cold compress upon the arm and hand. When the disease is manifestly settled, the quickest remedy is found in lancing the finger to the bone. Warm fomentations and poultices may afterward be applied to encourage the discharge.

Stone Bruise.—This disease, usually the result of accident, is of a nature similar to felon. The intense pain often present is relieved by placing the part in very cold water. It may be treated nearly like a felon.

Hang-Nail.—Do not attempt to cure the difficulty by cutting away the sharp edge of the nail which protrudes into the flesh. This will only increase the evil. Scrape the nail very thin in the center—nearly or quite to the quick. Then elevate the portion of the nail which encroaches upon the flesh, and place a little pledget of cotton underneath. Repeat the operation until a cure is effected.

Care of the Sick.—Every physician knows that in the majority of cases much more depends upon the care which the patient receives from his nurse, than from himself. A careless nurse has often turned the scale which hung nearly evenly balanced between life and death, adverse to recovery. The following are some of the more essential matters which demand attention, though nothing can supply the native tact and grace which are necessary to make a really good nurse:—

1. Secure a constant supply of pure air from out-of-doors. It is not sufficient to open a door leading into another room. Cold air may be very impure. Be careful to exclude the air from the kitchen and wash room as perfectly as possible.

2. Admit the light and sunshine freely. Direct sunlight is sometimes unpleasant to the patient; then shade the windows with a white curtain, which will admit the light. In a few diseases it may be necessary to keep the patient in a darkened room for a few days.

3. Maintain equable temperature. More fire is needed in the morning and evening than at noon. Regulate the heat by a thermometer hung near the bed. The mercury should never be above 70°. Old people especially need attention in this particular. A fall of a few degrees in temperature is often fatal to them. Avoid draughts.

4. The linen of the patient and his bedding should be changed every day at least. Daily washing will not be demanded in all cases, but the clothing should hang for several hours near a heated stove to air and dry.

5. Food for sick people should always be simply and neatly prepared. Light food is usually the best. Condiments should be very sparingly added, if at all. Oatmeal gruel is one of the best articles of food for sick persons. Fruit may be freely allowed if of good quality and ripe. Beef tea and broth will not sustain life. A dog starved sooner on a diet of beef tea than he would have done with nothing at all. Give food regu-

larly, as in health. Continual dosing with milk or any other food is harmful.

6. The patient himself should be kept scrupulously clean. The whole body should be washed several times a week at least. The mouth and teeth should be daily cleansed.

7. All discharges should be kept in covered vessels, and should be removed from the room at the earliest moment possible.

8. The sick chamber should be made pleasant by tasteful arrangement of its contents, by flowers, simple pictures, etc. Frequent change in the aspect of the room is desirable.

9. The patient should never be kept in a state of expectancy. When a promise is made him, fulfill it promptly.

10. Whispering or low talking in the sick-room or adjoining rooms will arouse the patient's fears unnecessarily. Avoid it.

11. Hasty movements in the sick-room are always annoying to a patient. A calm, deliberate air on the part of the nurse inspires confidence.

12. Arrangements for the night should be made before the patient becomes sleepy, so that he may not be disturbed. Otherwise, the movements necessary in making preparations for the night may cause him to become so restless that sleep will be impossible.

13. All avoidable noises should be prevented. Creaking doors, squeaking boots or shoes, a swinging blind, or a flapping curtain, are intolerable to the sensitive ears of invalids. Coal should never

be poured from the scuttle upon the fire. Bring it into the room in small parcels wrapped in damp paper. These can be laid upon the fire noiselessly.

14. If the patient can sleep, let him sleep. Never think of waking a sick person out of a sound sleep. Refreshing sleep will do him more good than all the medicines and baths in the world.

15. The covering of the patient in bed should be several light, porous blankets, rather than one or two heavy ones.

16. Strangers and visitors should be prohibited from entering the sick-room of a feeble patient. Visiting will often determine a fatal issue of the disease.

17. Water kept in a sick-room should be often changed. Never drink that which has been in the room more than a few minutes.

18. Always wear a cheerful face. Do not look solemn and anxious, even though the case is grave.

19. Never annoy the patient by questions or too much conversation.

20. Always recollect that nature must cure. All you can do is to make the conditions as favorable as possible.

Signs of Real Death.—It has sometimes happened that people have been buried alive when they were seemingly dead. Such a sad mistake can be prevented by applying the following simple tests:—

1. The loss of sensibility and warmth, and cessation of the pulse and the breathing, are the signs which at first indicate death ; but these are not always reliable.

2. Rigidity of the muscles is another better evidence, but this is not wholly decisive ; yet if the muscles remain soft after death, interment should be delayed.

3. The most reliable sign of death, perhaps the only decisive one, is putrefaction. This usually begins first in the lower part of the abdomen.

4. Another test of some value in doubtful cases is tying a cord tightly around a finger. If death has taken place, the color will remain unchanged. If the heart still beats, the end of the finger will become of a deeper color.

5. The application of a hot iron or other caustic appliance will not produce a blister on a dead body.

Dr. Holmes on Trail Dresses.—Our landlady's daughter is a young lady of some pretensions to gentility. She wears her bonnet well back upon her head, which is known to all to be a mark of high breeding. She wears her trains very long, as the great ladies do in Europe. To be sure, their dresses are so made only to sweep the tapestried floors of chateaus and palaces, as those odious aristocrats of the other side do not go dragging through the mud in silks and satins, but, forsooth, must ride in coaches when they are in full dress.

It is true, that, considering various habits of American people, also the little accidents which the best-kept sidewalks are liable to, a lady who has swept a mile of them is not exactly in such a condition that one would care to be her neighbor. But confound the make-believe women we have turned loose in our streets! Where do they come from? Not out of our parlors, I trust. Why, there isn't a beast or a bird that would drag its tail through the dirt in the way these creatures do their dresses.

Because a queen or a duchess wears long robes on certain occasions, a maid of all work or a factory girl thinks she must make herself a nuisance by trailing about with her—pah! that's what I call getting vulgarity into your bones and marrow. Making believe what you are not is the essence of vulgar people. If any man can walk behind one of these women and see what she rakes up as she goes, and not feel squeamish, he has got a tough stomach. I wouldn't let one of 'em into my room without serving them as David served Saul at the cave in the wilderness—cut off his skirts, sir; cut off his skirts.

Don't tell me that a true lady ever sacrifices the duty of keeping all about her sweet and clean to the wish of making a vulgar show. I won't believe it of a lady. There are some things that no fashion has a right to touch, and cleanliness is one of those things. If a woman wishes to show that her husband or father has got money which she wants and means to spend, but does n't know

how, let her buy a yard or two of silk and pin it to her dress when she goes out to walk, but let her unpin it before she goes into the house.

Medicine to the Dogs.—Many years ago, when cholera was rife in Ireland, it seemed to defy the skill of the faculty to such a degree that the panic-stricken people believed the doctors poisoned the patients ; and in some instances, they threatened to pull down the hospitals. During the while, a physician was applied to very urgently by the brother of a cholera patient to make a visit at the dead hour of the night, and at considerable distance from his residence. Being unable to attend, he carefully prepared and gave the messenger medicines suited to the emergency, and dispatched him, with the injunction to inform him if his brother was not relieved by morning, and he would call.

A few days afterward, he met the brother-messenger in the street, and the following conversation occurred :—

“ Well, John, how is Pat ? ”

“ Long life to your honor, he’s finely ! ”

“ I’m very glad to hear it, John ; it’s an ugly complaint, that cholera.”

“ Throth, and your honor, it is ; and poor Pat had a hard time of it, but praised be the Lord, he’s well again ; and plase your honor, the dog’s dead.”

“ What dog ? ”

“Oh! your honor, it's for sartin the dog's dead.”

“What dog are you talking about, my good fellow?”

“Plase your honor, I gave the medicines the doctor sent, to the dog, and he's dead; but Pat's finely, your honor.”

Items for Tobacco-Users.—The New York *Dutchman*, which certainly should be posted, speaks as follows: “The tobacco crop, for the year 1850, amounted to nearly 200,000,000 of pounds; of this 200,000,000, \$8,000,000 worth was consumed at home. The census also informs us that our ‘chewing’ is on the increase. In 1840, the consumption per head, in the United States, amounted to 2 lbs. and 1-2 oz.; in 1850, to 3 lbs. 8 oz.; which shows that our taste for filth increased 70 per cent. in the short period of ten years. The spittle made per year by our smokers and chewers, would, it is estimated, fill a reservoir as long, wide, and deep as the Erie Canal, while the amount of short-cut annually masticated by our people would, if thrust down the throat of Vesuvius, keep the crater vomiting for the next two centuries. Why is there not a society for the suppression of this abuse of the salivary glands?”

ACCIDENTS AND EMERGENCIES.

THE injuries resulting from accidents usually demand instantaneous action. A little delay or confusion, or misdirected effort, in a case of severe burning, drowning, or hemorrhage, will often sacrifice a human life. The following simple directions should be carefully studied so that they can readily be made available at any moment:—

Drowning and Suffocation.—The chief remedy to be used in all cases is *artificial respiration*. There are several methods which are very serviceable. The following, which is the most approved method for restoring drowned persons, we copy from a publication issued by the Michigan State Board of Health, the Secretary of which, Dr. H. B. Baker, has kindly furnished us with cuts for illustration:—

TREATMENT OF THE DROWNED.—"Two things to be done: 1. Restore breathing; 2. Restore animal heat.

"**RULE 1.**—*Remove all obstructions to breathing.* Instantly loosen or cut apart all neck and waist bands; turn the patient on his face, with the head down hill; stand astride the hips with your face toward his head, and, locking your fingers together under his belly, raise the body as high as you can without lifting the forehead

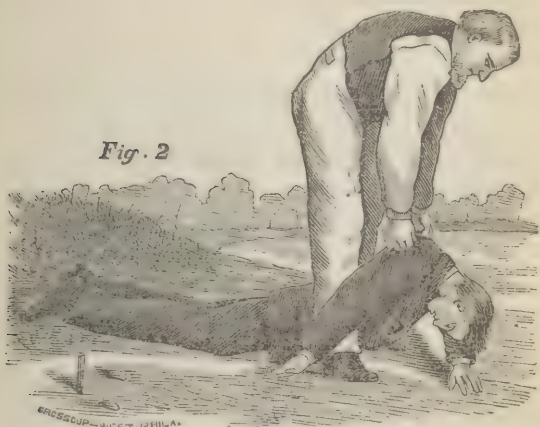
off the ground (Fig. 1), and give the body a smart jerk to remove mucus from the throat and water from the windpipe; hold the body suspended long enough to slowly count *one, two, three, four, five*, repeating the jerk more gently two or three times.



“RULE 2.—Place the patient on the ground, face downward, and maintaining all the while your position astride the body, grasp the points of the shoulders by the clothing, or, if the body is naked, thrust your fingers into the armpits, clasping your thumbs over the points of the shoulders, and *raise the chest as high as you can* (Fig. 2) without lifting the head quite off the ground, and hold it long enough to *slowly* count one, two, three. Replace him on the ground, with his forehead on his flexed arm, the neck straightened out, and the mouth and nose free. Place your elbows against your knees, and your

hands upon the sides of his chest (Fig. 3) over the lower ribs and press downward and inward

Fig. 2



with increasing force long enough to slowly count one, two. Then suddenly let go, grasp the

Fig. 3.



shoulders as before and raise the chest (Fig. 2);

then press upon the ribs, &c. (Fig. 3). These alternate movements should be repeated ten to fifteen times a minute for an hour at least, unless breathing is restored sooner. Use the same regularity as in natural breathing.

“**RULE 3.**—After breathing has commenced, **RESTORE THE ANIMAL HEAT.** Wrap him in warm blankets, apply bottles of hot water, hot bricks, or anything to restore heat. *Warm the head nearly as fast as the body, lest convulsions come on.* Rubbing the body with warm cloths or the hand, and slapping the fleshy parts may assist to restore warmth, and the breathing also. If the patient can **SURELY** swallow, give hot coffee, tea, milk, or a little hot sling. Give spirits sparingly, lest they produce depression. Place the patient in a warm bed, and give him plenty of fresh air; keep him quiet.

“*Avoid Delay.* A **MOMENT** may turn the scale for life or death. Dry ground, shelter, warmth, stimulants, etc., at this moment are nothing—**ARTIFICIAL BREATHING IS EVERYTHING**—is the **ONE REMEDY**—all others are secondary.

“*Do not stop to remove wet clothing before efforts are made to restore breathing.* Precious time is wasted, and the patient may be fatally chilled by exposure of the naked body, even in summer. Give all your attention and effort to restore breathing by forcing air into, and out of, the lungs. If the breathing has just ceased, a smart slap on the face, or a vigorous twist of the hair will sometimes start it again, and may

be tried incidentally, as may, also, pressing the finger on the root of the tongue.

“Before natural breathing is fully restored, do not let the patient lie on his back unless some person holds the tongue forward. The tongue by falling back may close the windpipe, and cause fatal choking.

“If several persons are present, one may hold the head steady, keeping the neck nearly straight; others may remove wet clothing, replacing at once clothing which is dry and warm; they may also chafe the limbs, and thus promote the circulation.

“*Prevent friends from crowding around the patient and excluding fresh air; also from trying to give stimulants before the patient can swallow. The first causes suffocation; the second, fatal choking.*

“*Do not give up too soon. You are working for life. Any time within two hours you may be on the very threshold of success without there being any sign of it.*”

MARSHALL HALL'S READY METHOD.—This famous method consists, briefly, in laying the patient with his face downward, his arms folded beneath his forehead, and then slowly rolling him upon his side, restoring him again to his former position. By this means, the chest is alternately compressed and expanded, thus imitating the movements of respiration. This method has been variously modified.

SYLVESTER'S METHOD.—This method, which

has been proposed more recently, is highly recommended by many physicians. Raise the arms from the sides until they meet above the head; then bring them slowly back to the sides again, pressing them against the sides of the chest. Repeat this sixteen or eighteen times a minute. It is a very efficient means when skillfully applied.

Upon submersion in the water, the epiglottis, a little valve at the top of the windpipe, closes, shutting out the water from the lungs. After a time, the muscles relax, and the valve opens. Water then enters the lungs. After this occurs, there is no longer any possible chance for recovery; but as there is no ready means for determining accurately the condition of the lungs, every effort should be made to resuscitate the patient by the means already described. The length of time a person can live under water will depend very much upon the amount of pure air in his lungs at the time of submergence.

Poisonous Gases.—Carbonic acid (more properly carbon di-oxide) is the most common cause of suffocation. Chlorine gas, illuminating gas, the vapor of burning sulphur, ether, and nitrous oxide or laughing gas, with other poisonous gases, produce death in the same way, though some of them are active irritants in addition.

Carbonic acid is heavier than air, and, in consequence, it accumulates in old wells, caves, deep valleys, and other low places. It is formed in mines in large quantities, at times, and is known

to miners as "choke damp." It is also formed in the vats of breweries by fermentation. In the burning of limestone it is also produced in enormous quantities. When the kilns are opened, it sometimes pours out so rapidly as to suffocate the workmen before they can escape. Miners are frequently destroyed by a sudden gust of "choke damp."

Old wells should never be entered without first testing the air at the bottom. Do this by lowering a burning candle. If it is extinguished, or burns feebly, carbonic acid is present, and descent would be extremely perilous. If it burns brightly, no fears need be entertained. If gas is found to be present, it can be dislodged by throwing into the well burning fagots or paper. Old cellars and cisterns are sometimes dangerous on the same account; they may be tested in the same way.

Upon the inhalation of the first breath of carbonic acid, the person usually falls, and thus remains exposed to the poisonous effects of the gas. Under such circumstances, speedy and well-directed efforts are necessary to prevent death.

In a burning building, the purest air is near the floor, as the smoke containing the carbonic acid is hotter than the air when first formed, and rises. In escaping from a burning building, it is sometimes advantageous to go upon all-fours so as to breathe the best air.

Charcoal burning in a room in an open vessel will produce large quantities of carbonic acid

gas in a short time. In France, suicide is often committed by this means.

Illuminating Gas often escapes into sleeping rooms through leakage of the gas pipes, or by reason of failure to completely shut off the supply to the burner upon extinguishing the flame.

People unaccustomed to the use of gas are sometimes so thoughtless as to blow out the flame as they would that of a lamp or candle, leaving the gas to find unobstructed entrance. Many lives have been lost in this way.

Hanging is another means by which the supply of air to the lungs is cut off, causing asphyxia. A red line around the neck is usually indicative of this manner of producing suffocation.

The remedies in all cases of suffocation are essentially the same. Remove the patient from the cause, or, *vice versa*, as quickly as possible. Draw the tongue forward, clear the mouth, dash cold water upon the face and chest, rub the body vigorously, and apply artificial respiration. If chlorine has been accidentally breathed, inhale as quickly as possible ammonia gas.

Choking.—When a particle of food, or any other body, becomes lodged in the throat, go upon all-fours and cough. If it is not expelled, the patient should be seized by the heels and suspended head downward, while his back is percussed by another person. If the body can be seen by drawing the tongue well forward, seize it with a pair of forceps, or a hook made by

bending the end of a wire or a hair-pin which has been straightened. Sometimes it may be elevated from its position by mean of a spoon handle. If it is out of sight and all efforts to expel it are unavailing, press it down with the finger or a smooth rod with a rounded end, throwing the head back as far as possible while doing so. A body which has lodged part way down the esophagus may sometimes be pressed down into the stomach by pressing hard upon each side of the neck close to the windpipe.

Lightning Stroke.—Dr. Fothergill remarks as follows on this subject:—

“Persons struck by lightning are not always dead when they appear to be so. There are few recoveries from this state, because no means are tried to restore the sufferer. In the tropics there are many instances of persons, struck down by lightning, recovering after a heavy thunder shower; and it would appear that cold affusion to the body has a decided action in such cases. The injured cannot be harmed by the free use of cold water, and if only an occasional recovery took place, it would be well worth the pains bestowed. The persons so injured should have cold water poured or even dashed freely over them.”

Artificial respiration should also be employed.

Sunstroke.—Carry the patient at once to a cool, shady place, remove his clothing, and dash cold water upon his body, especially the head and chest. Rubbing the spine with ice is an excel-

lent remedy. Continue the cold application until the unnatural heat is materially decreased. Artificial respiration should be practiced at the same time. No stimulants should be given to the patient.

Hemorrhage.—If an artery is wounded, the blood will flow in jets, sometimes being thrown several feet, and will be of a bright red color. If the wounded vessel is a vein, the blood will be of a dark color, and will flow in a steady stream. Slight hemorrhage will be easily controlled by pressure over a little pad of folded linen applied directly to the wound.

When large vessels are injured, greater care is necessary. If the vessel is an artery, apply the pressure between the wound and the heart. If it is a vein, apply the pressure upon the opposite side.

The application of cold, by means of cloths wet in iced water, snow, or pounded ice, is a very effective means of stopping hemorrhage.

In case the hand, forearm, or foot is severely wounded, it should be elevated above the rest of the body and bound in towels in which pounded ice is folded. Hemorrhage from the end of a finger or toe may be stopped by the application of pressure to the sides.

When a very large artery of the arm or leg is wounded, resulting in hemorrhage which cannot be quickly controlled by any of the means mentioned, proceed as follows:—

Take a handkerchief or a strip of cloth of sufficient length to reach around the limb. Tie a large knot in the center. Apply the knot just over the course of the wounded vessel, above the wound. Now pass a stout ruler or rod beneath the bandage upon the opposite side from the knot. Twist it around so as to tighten the bandage and thus compress the artery beneath the knot. Increase the compression until the hemorrhage is controlled. A tight bandage of this kind should not be retained too long, as it may destroy the life of the parts below. Its object is to control the hemorrhage only until the wounded vessel can be secured and tied by a surgeon or other competent person.

Bleeding from wounds of the scalp is easily controlled by pressure upon the seat of injury.

Nose-Bleed.—Remove all constrictions from the throat, so that the return of blood from the head will be unobstructed. Hold the head erect for the same reason. Inclining it forward encourages the hemorrhage. Twist the corner of a handkerchief or piece of old linen and press it tightly into the bleeding nostril. Hold it in place until the bleeding ceases, unless it passes backward into the throat, when other measures will be required. Blowing the nose, and bathing it in water, increase the hemorrhage rather than check it.

Pressure upon the facial artery upon the side on which the hemorrhage occurs, will sometimes check it. Apply firm pressure upon the notch

on the lower border of the lower jaw just in front of the angle.

When the bleeding has once stopped, do not disturb the clot that has formed in the nose, as it may be induced again by so doing. In very severe cases the posterior opening from the nasal cavity into the mouth will require plugging; surgical assistance will be required for this.

Hemorrhage from the nose is seldom fatal. When scattered upon the floor or clothing, a few ounces of blood look like a quart. A very few spoonfuls will color a large quantity of water very red.

Bleeding from Lungs.—Blood which is expectorated by coughing often comes from the throat or nasal cavity, trickling down into the air passages and being coughed out. This is nearly always of a dark color, and is commonly clotted. Blood which comes from the lungs is of a bright red color, and is frothy from the admixture of air. The amount of blood lost is much less than usually thought, and is seldom the cause of death.

Keep the patient as quiet as possible, with his head elevated a little. Instruct him to restrain his cough as much as he can, and to avoid all violent efforts at coughing. Make cold applications to the spine and hot to the feet and limbs. Salt and other drugs are often employed, but it is exceedingly doubtful whether they are of the slightest value, since they pass at once to the stomach not entering the lungs at all.

Cuts.—Cuts should be dressed in such a way that the severed edges may unite properly. Firm clots of blood lying in the wound should be carefully removed, with any other foreign body. If the bleeding has ceased, the edges may be brought together and secured by stitches or adhesive straps, according to the size and position of the wound. Small wounds sometimes require only that the edges be thus brought together to stop the bleeding. The strips of plaster used should be narrow, and there should be narrow spaces left between them, to allow room for the escape of the discharge, should any occur.

If the end of a finger or toe has been accidentally cut off, it should be at once replaced, even though it was entirely severed. Being kept in place, it will be quite likely to adhere and prevent an ugly scar. If the severed piece is frozen or badly bruised, the attempt will be useless.

Dressing for Wounds.—As a dressing to be applied to all wounds, nothing is equal to water. While swollen and painful, cold applications should be made by means of thin compresses, which should be changed every few minutes. After the pain and inflammation have subsided, apply thin compresses kept constantly wet with tepid water. In some cases submersion of the part in water is serviceable.

The various "pain-killers," liniments, and washes have no healing virtue whatever. Opium and arnica relieve the pain by paralyzing the

nerves only. They simply hide the condition of the wound from the patient. Both are poisons which retard healing.

Bruises.—Apply as quickly as possible a hot fomentation. Renew the application every five minutes for an hour or two. Apply afterward the tepid compress. This will prevent soreness, and much of the swelling and discoloration which would otherwise result. This is the way to treat a black eye, a broken nose, or a foot which has been pierced by a rusty nail.

Sprains.—Apply hot fomentations at first; afterward wear tepid or cool compress continually. Absolute rest of the joint is also required.

Fractures and Dislocations.—These accidents usually require the attention of a skillful surgeon, who should be called at once.

Burns and Scalds.—If a person's clothes catch on fire, wrap about him at once a blanket, cloak, rug, or similar article, bringing it tight about the neck to protect the head and face. Remove the burned clothing as quickly as possible and apply wet linen cloths to the burned surfaces. Change every five minutes, applying another cloth instantly after one is removed. (For further treatment see page 53.)

To burns produced by lye, caustic potash, or other alkalies, apply vinegar or some other weak acid as quickly as possible. To a burn produced by an acid, apply an alkali; as soda, ashes, or simple earth.

Freezing.—In cases of freezing, the great danger is in thawing out too quickly, the result of which is inflammation and death of the frosted parts; or, in milder cases, chilblain. Keep the patient away from the fire. Place him in a cool room, and rub the frozen parts with snow or cold wet cloths until the circulation is re-established. If the patient is apparently dead, artificial respiration should be practiced as long as there is a particle of hope of recovery.

Those who are exposed to severe cold should remember that one of the symptoms of freezing is an uncontrollable desire to sleep. Resist it.

Bite of Mad Dog.—Remove the clothing from the part at once and apply suction to the wound with the mouth. As quickly as possible, remove the injured flesh with a sharp knife or destroy it with an iron at white heat, afterward applying the water-dressing or a poultice.

Few persons that are bitten by rabid animals ever have the disease. Hydrophobia is more common among dogs in the winter than in the summer, contrary to the common supposition. The skunk or polecat is liable to the same disease. Its bite is more dangerous than that of the dog.

Rattlesnake Bite.—Destroy the poison virus in the manner described in the preceding article. As with the bites of mad dogs, few of those bitten are poisoned, and fewer still fatally so. Artificial respiration and rubbing the spine with ice have been highly recommended. Whiskey is

entirely worthless as an antidote. It does more harm than good when administered.

Bee-Stings.—The stings of bees, wasps, and hornets are sometimes extremely painful. Extract the sting, then apply salt and water, ammonia water, alcohol, camphor, or half an onion.

The latter will often give immediate relief; the others increase the pain at first.

The same remedies should be applied to the bites of the mosquito, spider, gnat, flea, and other insects.

Dirt in the Eye.—Particles of dirt or other foreign bodies in the eye should be removed at once. If the object is upon the visible portion of the eyeball, remove it with the corner of a handkerchief. If concealed beneath the lid, roll the lid over upon a pencil or turn it outward with the finger and remove the speck in the same way. Dirt beneath the upper eyelid can often be removed by drawing it outward and downward over the under lid. Then press it upon the under lid and open the eye. Blowing the nose while the eye is closed will assist in the removal of small particles of dirt. Particles of iron which have become embedded in the tissue of the eye may be loosened and removed by a needle mounted in the end of a pencil.

Foreign Bodies in the Ear.—Never use a sharp instrument about the ear in any way. Insects can generally be dislodged very speedily by dropping into the ear a little oil or warm

water. Solid bodies like peas, beans, or pieces of stone, can usually be removed by the diligent application of warm water and soap by means of a syringe. The head should be inclined to one side so that the object may readily drop out. If this is unsuccessful after thorough trial, use a loop of fine wire, a small scoop, or a pair of delicate forceps. Hardened ear wax should be softened by warm water and soap and then removed with great care by means of the scoop.

Foreign Bodies in the Nose.—Blow through the nose with as much force as possible, at the same time closing the mouth and the unobstructed nostril. Sneezing will sometimes expel the cause of obstruction. A loop of wire or a blunt hook may be successfully used; but care must be taken to avoid crowding the object further in. If it is not tightly embedded, it may be driven out by making the water from a syringe pass up the unobstructed nostril and out at the one containing the foreign body.

Chimney on Fire.—Throw into the stove, or upon the coals in the fire-place, a handful of salt or sulphur. Close the stove-draught, or hold a board or blanket before the fire-place.

What to Do in Poisoning.—Give an emetic at once, which may consist simply of tepid water in large quantities, or the same with the addition of mustard or common salt. After drinking several cupfuls, tickle the throat with the

finger or a feather. Continue taking a cupful every two or three minutes until vomiting occurs. Individual poisons require special remedies. The following lists comprise the most common poisons and their antidotes:—

Vegetable Poisons.—Opium, Morphia, Camphor, Aconite, Laudanum, Paregoric, Strychnia, Tobacco, Lobelia, Arnica, and other vegetable poisons require the emetic and the application of a stomach pump if possible. Milk and mucilaginous drinks should be given freely after thorough vomiting. Artificial respiration should be employed in poisoning by strichnia and opium. The cold douche is also excellent in poisoning by the latter drug. Keep the patient awake, if possible, by making him walk about.

Acids.—Sulphuric (oil of vitriol), Nitric (aqua fortis), Hydrochloric (muriatic), and Oxalic Acids, are the more common. Drink largely of water at once. Acids are neutralized by alkalies. Calcined magnesia is the best antidote. Chalk (powdered), whiting, lime, weak lye, and strong soap-suds, are the best substitutes. Something must be done quickly in case of poisoning by acids.

Alkalies.—The most common which are sources of poisoning are Ammonia, Potash, Soda, Pearlash, Lye (from wood ashes), and Salts of Tartar. Drink copiously of weak vinegar or lemon juice. Afterward take some mucilaginous drink, or oil.

Mineral Poisons.—For Corrosive Sublimate, White Precipitate, Red Precipitate, and Vermilion, take the whites of several eggs in a quart of tepid water. Soap-suds thickened a little with wheat flour is the best substitute for eggs. No other emetic is necessary.

Arsenic, Cobalt (fly powder), Ratsbane, Paris Green, and other compounds containing Arsenic, should be expelled by vomiting as soon as possible. Then administer quite large doses of calcined magnesia.

Acetate of Lead, White Lead, Litharge, and Saltpetre, require an emetic followed by oil or mucilage.

For Lunar Caustic (nitrate of silver), administer half a tablespoonful of salt in a pint of water.

The antidote for Matches or Phosphorus is calcined magnesia, followed by soothing fluids.

Antidotes for Verdigris and Blue Vitriol (sulphate of copper), are eggs, milk, and soda.

Alcoholic Poisoning.—A man found “dead drunk” should be treated like any other case of narcotic poisoning, as from opium.

Chronic Poisoning by Lead, Opium, Tobacco, or any other drug which has been received into the system for a long time, requires, first, that the cause be wholly removed at once; second, attention to the general health. In the case of Opium and Tobacco, the disuse of the drugs is attended with a good deal of unpleasant feeling on the part of the patient. He feels as though he will certainly die. His fears are groundless. He is in much less danger of dying than before.

Poisonous Candies and Food.—The paints used in the manufacture of candies are poisonous, and often sicken those who eat the candies, sometimes fatally in the case of children.

Fish and meat, either fresh or canned, are frequently sources of poisoning. Decayed fruit or other food, shellfish, and mushrooms, are often productive of injury in the same way. Such cases should be treated on the general principles relating to poisoning.

Soda Water.—The water nearly always contains lead. The sirups are most wretched imitations of natural flavors, and are made from such things as old cheese, tar, and mineral acids.

BATHS, PACKS, FOMENTATIONS, ETC.

WATER, applied in the various modes in which it may be, is one of the most potent of remedies. Wrongly applied, it may be productive of great harm. The following are a few general rules which should always govern its use:—

1. Never bathe when exhausted or within three hours after eating, unless the bath be confined to a very small portion of the body.

2. Never bathe when cooling off after profuse sweating, as reaction will then often be deficient.

3. Always wet the head before taking any form of bath to prevent determination of blood to the head.

4. If the bath be a warm one, always conclude it with an application of water which is a few degrees cooler than the bodily temperature.

5. Be careful to thoroughly dry the patient after his bath, rubbing vigorously to prevent chilling.

6. The most favorable time for taking a bath is between the hours of ten and twelve in the forenoon.

7. The temperature of the room should be at about 80° or 85°.

8. Baths should usually be of a temperature which will be the most agreeable to the patient. Cold baths are seldom required. Too much hot bathing is debilitating.

The following are brief descriptions of the

more important baths applicable in the home treatment of disease :—

Sponge-Bath.—This bath consists in rubbing the whole body with a sponge or towel wet in water of an agreeable temperature ; is most useful for a general ablution.

Sitz-Bath.—A tub made especially for the purpose, or a common wash-tub, may be employed. Place in the vessel sufficient water to cover the hips and lower part of the abdomen. The patient or an attendant should rub and knead the abdomen during the bath. The water should be of a temperature ranging from 85° to 98° , according to the condition of the patient. Cover the patient during the bath.

Wet-Sheet Pack.—Spread two or three comfortables upon a bed or mattress. Spread over the whole a woollen sheet. Wring out of water of the desired temperature a linen or cotton sheet. Spread it quickly upon the bed, and let the patient immediately lie down in the middle. Then quickly envelop him in the wet sheet, wrapping him snugly from head to foot. Then cover him with the comfortables, and let him remain quiet as long as required. Elevate the head a little, and use care to have the feet warm. Half-packs may be taken in a similar manner, confining the application to the trunk of the body.

Chest-Wrapper.—The wrapper should be made of coarse cloth, and should be shaped so as to fit the chest. Apply it after wringing just sufficiently to prevent dripping. Cover with a light, dry flannel wrapper. Change three or four times a day.

Half-Bath.—For this bath is required a vessel of sufficient size to allow the patient to sit upright with his limbs extended. Enough water to cover the limbs, thighs, and lower part of the abdomen, is necessary. During the bath, the attendant should rub vigorously the limbs, back, chest, and abdomen, of the patient.

Pail-Douche.—This consists in pouring water over the shoulders of the patient. It is often employed to tone up the surface after a hot bath.

Compresses.—Apply wet cloths in the same manner as in fomentations, wetting them in either cold, cool, or tepid water, according to the effect desired.

Rubbing-Wet-Sheet.—This bath consists in enveloping the patient in a wet sheet, and rubbing him briskly with the hand outside the sheet.

Fomentations.—Wring out of water as hot as can well be borne, a folded flannel cloth, and apply it quickly to the part to be treated. Cover with a dry cloth, and change once in five minutes.

Hot Applications.—Besides fomentations, heat may be applied in several other ways. Bottles filled with hot water, hot bricks or stones wrapped in papers or cloths, hot cloths, bags filled with hot sand, salt, or corn meal, and rubber bags filled with hot water, are convenient methods of applying dry heat.

Moisture and heat may be applied in a variety of ways also. Instead of wringing cloths out of hot water, put them in a steamer for a few minutes. This saves the trouble of wringing them. When there is no water hot, and a fomentation is wanted quickly, wring a cloth out of cold water, spread it between the folds of a newspaper, and lay the paper upon the top of the stove, or press it against the side. In a minute it will be hot. Wrap stones or bricks in a moist cloth. Poultices of various sorts answer the same purpose.

All hot applications should be renewed every few minutes until the desired effect is obtained.

Vapor-Bath.—Place the patient in a chair which has a wooden bottom, beneath which place a pail half filled with water. Surround the patient completely, chair and all, with a woolen blanket, leaving only his head visible; even this may be covered a little while at a time in cases of neuralgia, if desired. Add other blankets sufficient for

warmth. Now raise the blankets a little, behind, and place in the pail a stone or brick which has been heated sufficiently hot to hiss when it touches the water. Do not drop it into the water at once, but let it in gradually. As this becomes cool, add another in the same way. The bath should not usually be continued more than twenty minutes. Wash off quickly with tepid water upon coming out of the bath. The head should be wet from the first.

Hot-Air Bath.—Prepare the patient in the same manner as directed for the vapor-bath. Instead of the pail of water, place beneath the chair a cup containing a small quantity of alcohol. Wet the head well, and then light the alcohol. Wash with tepid water after the bath, and be careful to avoid taking cold.

Enemas.—An enema is a small portion of water thrown into the rectum by means of a syringe. The water may be either cool, tepid, or warm, as occasion may require.

USEFUL HINTS AND RECIPES.

Soap to Remove Grease Spots.—Take equal parts of soft soap and fuller's earth. After beating well together, form into cakes. Moisten the spot, and rub the soap upon it. Allow it to dry, then rub it well, with warm water, rinse, and dry.

To Remove Grease from Silk.—Grease may be removed from silk and other delicate fabrics, thus: Upon a smooth surface spread a woolen cloth. Lay upon this the silk with the right side down. Over the grease spot lay a piece of coarse brown paper. Place upon this a flat-iron sufficiently hot to just scorch the paper. A very few seconds will suffice. Remove the flat-iron and paper and rub the spot briskly with a piece of paper.

If this is not quite successful, apply a little powdered chalk or magnesia to the spot, under the brown paper, before applying the flat-iron.

To Restore Color.—When the color has been destroyed by acids, apply a little ammonia (hartshorn). The restoration will be the more perfect, the more recent the application of the acid.

To Remove Stains from the Hands.—For fruit stains, apply a solution of oxalic acid, and wash quickly. Another way : Light a sulphur match and clasp the hand about it while the sulphur is burning.

Removing Fruit Stains.—Pour boiling water upon the stained spot, and it will usually disappear. This should be done before the spot has been wet with anything else.

Ink Stains.—Apply a solution of oxalic acid to the spot, and wash quickly. If a reddish stain is left, apply a solution of chloride of lime.

To Remove Mildew.—Wet the linen, apply soap to the spot, and then apply fuller's earth or salt and lemon juice to both sides. Air for a few hours. Or, soap the spot, and then apply finely powdered chalk, rubbing it in very thoroughly.

Chloride of lime will remove mildew. Dissolve one ounce in two quarts of water. Steep the linen in the solution all day.

To Remove Paint from Cloth.—Apply spirits of turpentine with a sponge. After an hour or two, rub the spot as in washing, and the paint will crumble off.

To Remove Paint from Wood.—Apply to it a strong solution of oxalic acid, when it will easily crumble off. It may be removed from glass or metal in the same way.

Cements for Glass and China.—1. Mix thoroughly an ounce of pure white lead in oil with ten grains of finely powdered acetate of lead. Apply at once, and allow the mended article to dry two weeks before it is used.

2. Rub old cheese to a fine thick paste with a little wa-

ter. Add one-fourth pulverized lime. One of the best cements for glass, porcelain, stone, and wood.

3. Burn oyster shells, pulverize fine, and mix to a thick paste with white of egg. Apply at once to the edges of the glass. Secure them tightly together until dry. Freshly burned lime will do, but is not so good. The cement must be made when used.

4. Soak Russian isinglass in water over night, to soften. Then heat until it is dissolved ; mends china and glass.

Cements for Wood.—1. In a pint of soft water dissolve 6 ozs. of best glue. Remove from the fire and add $\frac{1}{2}$ oz. of white lead, stirring it in well. Then stir in 3 gills of whisky. This cement will remain thin at all ordinary temperatures. It should be warmed and well stirred when it is to be applied. Good for wood, marble, glass, and china.

2. Dissolve a pound of glue in three pints of water. Add 2 ozs. of powdered chalk and $\frac{1}{2}$ oz. of borax.

Liquid Glue.—Fill a bottle two-thirds full of common glue. Fill the bottle with whisky. It will dissolve in a few days, when it will be ready for use. Must be kept tightly corked.

Cements for Iron.—Take equal parts of sulphur and white lead, with about a sixth of borax, mixing them so as to form a homogeneous mass. When about to apply it, wet it with sulphuric acid and place a thin layer of it between the two pieces of iron, which should then be pressed together. In a week it will be perfectly solid, and no traces of the cement will be apparent. This cement is said to be so strong that it will resist the blows of a sledge hammer.

2. Mix to a paste with vinegar 5 parts clay, 1 part salt, and 15 parts of iron filings. It will stand heat.

Cement for Stoneware.—To a cold solution of alum add plaster of Paris sufficient to make a rather thick paste. Use at once. It sets rather slowly, but is an excellent cement for mending broken crockery, eventually becoming as hard as stone.

How to Remove Rust from Clothing.—Oxalic acid will take rust or any other stain out of white goods. Dissolve a small quantity in boiling water and dip the spots in. The acid can be got at any drug store. Another way is to saturate the spots with lemon juice and spread the cloth in the sun ; if it do n't take out all the rust the first time, repeat the application.

To Clean Looking-Glasses.—Wash with a sponge wet in lukewarm soap-suds. Wipe dry, and rub with buckskin or a newspaper and finely powdered chalk. Polish windows in the same way.

To Cleanse the Hair.—Rub thoroughly into the hair the white of an egg. Wash with soft water until the egg is entirely removed. This leaves the hair soft and pliable. Never use alkalies or coarse soap on the hair.

Lotion for Fetid Perspiration.—Permanganate of potash, 1 dr., dissolved in half a pint of water. Wash the part twice a day. A wash of weak vinegar is quite as efficient in some cases.

Durable Whitewash.—Slack, with abundance of hot water, half a bushel of lime, stirring briskly meanwhile. When completely slacked, add sufficient water to dissolve. To this add two pounds of sulphate of zinc (white vitriol) and one pound of common salt. The last-named ingredients cause the wash to harden, and prevent cracking. If a cream color is desired, add yellow ochre. For stone color, add raw umber and lampblack.

Kalsomining Fluid.—The following is well recommended for walls : White glue, 1 lb. ; white zinc, 10 lbs. ; Paris white, 5 lbs. Soak the glue over night in 3 qts. of water. Add an equal quantity of water, and heat on a water bath until the glue is dissolved. Put the two powders into another vessel. Pour on hot water while stirring, until of the consistency of thick milk. Mix the two liquids thoroughly, and apply to the walls with a whitewash brush.

To Preserve Steel from Rust.—Cover the surface with finely powdered unslacked lime. The surface may first be smeared with melted tallow before the lime is sprinkled on, to cause it to adhere.

To Clean Leather.—Leather which is uncolored may be easily cleaned by wiping it with a sponge moistened in a solution of oxalic acid.

To Make Cloth Water-Proof.—In a bucket of soft water put $\frac{1}{2}$ lb. sugar of lead and $\frac{1}{2}$ lb. powdered alum. Stir occasionally until the solution becomes clear, then pour it off into another bucket, and immerse the garment in it. Allow the garment to remain in the solution twenty-four hours. Scotch tweed is the best material for a water-proof cloak.

There are several other methods : 1. Moisten the cloth on the wrong side with a weak solution of isinglass. When this is dry, apply a solution of nut-galls. 2. Moisten with a strong solution of soap, and then with a solution of alum. 3. Spread the cloth on a smooth surface with the wrong side up. Rub it with pure bees-wax until it is gray. Pass a hot iron over it, and brush it while still warm.

To Make Cloth Uninflammable.—1. To a quart of boiling water add 1 lb. chloride of calcium, and 1 lb. acetate of lime. Moisten the fabric in the solution, and dry.

2. Moisten the goods in a solution of phosphate of ammonia. Dry with a warm flat-iron.

Carron Oil.—Mix equal parts of linseed oil and lime water. Shake well. Good for burns.

Fire-Proof Paint for Roofs.—Slack stone-lime in a covered vessel. Take 6 qts. of the slacked lime, after it has been passed through a sieve, add 1 qt. of salt, and 1 gal. of water. Boil and skim. Add $\frac{1}{2}$ lb. powdered alum, $\frac{1}{4}$ lb. pulverized copperas. Then slowly add 6 ozs. of powdered potash. Finish by the addition of 2 lbs. of fine sand. Apply to the roof with a brush. It may be

colored as desired ; is very durable, and stops leaks in the roof.

Starch Polish.—1. Melt together at a gentle heat 1 oz. white wax and 2 ozs. spermaceti. Add a piece the size of a pea to starch sufficient for a dozen pieces.

2. Dissolve 2 ozs. of gum arabic in a pint of hot water ; bottle and cork. Add a tablespoonful to each pint of starch.

Paste.—Mix 8 parts of flour and 1 part of powdered alum with a little water. Beat out the lumps, and pour on boiling water until of the proper consistency, stirring briskly all the time. This is more adhesive than ordinary paste, and will last much longer.

To Color Black.—For 10 lbs. of goods, dissolve and boil $\frac{3}{4}$ lb. blue vitriol in sufficient water to cover the goods. Dip them three quarters of an hour, airing often. Then remove to another dye made by boiling 6 lbs. of logwood in a sufficient quantity of water for half an hour. Dip three quarters of an hour, air, and then dip three quarters of an hour more. Wash in strong suds.

To Color Blue.—For five lbs. of goods, dissolve $\frac{3}{4}$ lb. alum, $\frac{1}{2}$ lb. cream tartar. Boil the goods in the solution for half an hour. Throw them into warm water.

To Color Scarlet.—For two lbs. of goods, mix together and dissolve in sufficient water 1 oz. cream of tartar ; 1 oz. cochineal, well pulverized ; 5 ozs. muriate of tin. Boil the dye and place the goods in it. Work them briskly for a quarter of an hour, after which boil an hour and a half, stirring slowly while boiling. Wash in clear soft water, and dry in the shade.

To Color Green.—1. First, color yellow by soaking the goods in a solution made by steeping together 1 lb. fustic and $\frac{1}{4}$ lb. alum for 1 lb. of the goods. Remove the chips and add indigo, a tablespoonful at a time, until the desired color is obtained.

2. Make a yellow dye with yellow-oak and hickory

bark in equal quantities. Add indigo until the desired shade is obtained.

Liquid Bluing.—Pulverized Prussian-blue, 1 oz. ; oxalic acid, pulverized, $\frac{1}{2}$ oz. ; dissolve in 1 qt. of soft water. Use one or two tablespoonfuls to a tub, according to its size. Will not speck.

Soft Soap.—Cut fine 4 lbs. white soap in bars, and dissolve in 4 gals. of soft water by heating. Add 1 lb. of sal-soda, dissolve and mix.

Washing Fluid.—Boil together 1 lb. of sal-soda, $\frac{1}{2}$ lb. of stone-lime, and 5 qts. of water, stirring while boiling. Let it settle, pour off the clear fluid, and preserve for use in a stone jug.

Soak the clothes an hour or two in warm suds. Wring out, and soap the most dirty places. Add a tea-cupful of the fluid to a boiler half full of boiling water, and then add the clothes. It will save half the labor of washing, and will not injure the texture of the goods.

To Get Rid of Rats.—Scatter potash freely in their holes and runways. It will make their feet and mouths sore, and they will leave in disgust. Several varieties of traps are quite successful in catching them. Poisoning is not a very good plan, as the dead bodies of those which happen to eat the poison are usually left in some unobserved or inaccessible place where they undergo decay.

Tooth Powder.—To make a most excellent and perfectly harmless tooth powder, mix eight parts of precipitated chalk with one part of calcined magnesia. Flavor with a few drops of wintergreen or cinnamon oil if desired. Apply this to the teeth twice a day with a soft brush and pure soft water, or water and fine soap, and they will always glisten like ivory.

Wash for the Teeth.—1. Dissolve 1 dr. of carbolic acid with 2 ozs. of alcohol. Add this to half a pint of water. Use freely with a tooth brush. Is excellent as an application to cleanse artificial teeth.

2. Dissolve 1 dr. of permanganate of potash or soda in $\frac{1}{2}$ pt. of water. Place in a bottle and cork tightly.

Cleaning Bottles.—Small shot, pebbles, or broken charcoal, placed in a dirty bottle and shaken about with warm water and soap, will remove almost any kind of dirt. Charcoal is especially serviceable in removing unpleasant odors from bottles.

Black Ink.—2 ozs. extract of logwood ; 2 drs. bichromate of potash ; 1 dr. prussiate of potash. Dissolve the logwood in 2 qts. of soft water, soaking it over night and then boiling. Then add the bichromate and prussiate of potash after pulverizing. When the solution is complete, filter, and it will be ready for use. This is a very excellent ink.

Blue Ink.—Dissolve sufficient indigo in soft water to give the desired color ; is very good for ordinary use, but will fade.

Red Ink.—Mix 1 dr. of aqua ammonia, a bit of gum arabic as large as a hazel nut, equal parts of No. 40 and No. 6 carmine, and 7 drs. of soft water. It will be ready for use in a day or two.

Indelible Ink.—Dissolve $\frac{1}{2}$ sc. of nitrate of silver in a teaspoonful of aqua ammonia. In $2\frac{1}{2}$ teaspoonfuls of soft water dissolve 1 sc. of gum arabic. When the gum arabic is dissolved, add an equal weight of carbonate of soda. Mix the two solutions and boil in a bottle placed in a basin of boiling water. When it becomes black, it is ready for use.

To Etch on Metal.—Mix two parts of muriatic acid with one of nitric acid. Cover the surface of the metal with melted wax. When the wax is cold, write or draw upon it the desired name or design, with a sharp-pointed instrument. Be careful to remove the wax quite down to the surface of the metal. Apply the acid with a brush or feather, carefully filling the outlines of the design. In a few minutes wash the acids away with water, and wipe the surface with oil after removing the wax.

Borax Wash.—Dissolve 1 oz. of borax in 5 qts. of water. This is a good cleansing wash for the hands, and is also an excellent washing fluid. Many use it for the hair. It is rather severe for the latter purpose.

To Kill Ants.—Pour into their nests hot water, lime water, or a strong solution of alum.

Bug Poison.—Mix 2 ozs. alcohol, $\frac{1}{4}$ oz. camphor, $\frac{1}{2}$ oz. turpentine, and 1 dr. corrosive sublimate. Apply to infested places with a feather.

Plant Lice.—Shower the plant with a solution of carbolic acid in water, a dram to the pint; or fumigate with tobacco smoke.

Solder for Tin.—Melt together 5 ozs. of lead and $3\frac{1}{2}$ ozs. of tin.

Solder for Lead.—Melt together 1 oz. tin and 2 ozs. lead.

Soldering Fluid.—Dissolve in 1 oz. of muriatic acid as much zinc as possible. Add $\frac{1}{2}$ dr. of sal-ammoniac.

Mending Tin-Ware.—Every house-keeper can save many dollars by mending her own pans, dippers, and basins. If a hole in a basin is to be stopped, scrape the inside of the basin just around the hole until it is bright. Dip the end of a little wooden rod in the fluid, and rub it upon the scraped surface. Now place a small bit of solder over the hole, and heat the under surface over a candle flame until the solder melts. In a minute it cools, and the hole is stopped.

To Dry Boots.—Fill them with oats at night after removing them from the feet. Set them in a warm room. In the morning, shake out the oats and the boots will be found to be dry, and will not be shrunk and stiff as they would otherwise have been.

RECIPES FOR HEALTHFUL FOOD.

MOST of the following recipes are strictly healthful. We give few recipes for articles of food which would be in the *least degree* injurious, for the reason that cook books containing such recipes are already sufficiently numerous. Those who may not relish the plain dishes described, can readily so modify them by the addition of some simple condiment, as milk or sugar, as to make them palatable ; but the effort of each one should constantly be to learn to relish food prepared in as simple a manner as possible, and wholly free from injurious condiments.

Gems.—Into one part of pure, cold, soft water, slowly stir two parts of the best graham flour, making the batter just thick enough so that it will not settle flat. Bake in cast-iron gem pans or patty pans in a very hot oven. Have the pans very hot when the batter is put in. By combining the several grains in various proportions, many different kinds of gems may be made.

Corn-Meal Gems.—Upon one part of fine corn meal, pour two parts of boiling water, and mix well. Bake in gem pans, in a quick oven. This makes the simplest and sweetest corn cake that can be made.

Drop Cake.—Mix wheat or rye meal with cold water to a stiff dough, stirring until well mixed, and drop with a spoon upon a hot baking tin in a hot oven. Bake until well cooked and brown. Eat while warm.

Johnny Cake.—Prepare the batter as for corn-meal gems, and bake in a common baking tin. This is known in the South and West as “hoe-cake,” “corn-dodger,” etc. In the days of open ranges and fire-places, the batter was commonly baked upon a board before the fire.

Snow Cake.—Take one part of corn meal and two parts dry snow. If the snow is moist, use less. Mix well in a cold room. Bake in gem pans, filling the pans rounding full. Place quickly in a very hot oven. If the cakes are

raw, or too dry, more snow was required. If they are heavy, too much snow was used.

Breakfast Cake.—Saturate oatmeal of medium fineness with water. Pour the batter into a shallow baking dish, and shake down level. It should be wet enough so that when this is done a little water will stand on the top. Bake twenty minutes in a quick oven. It may also be baked in fifteen minutes on the top of the stove in a covered dish.

Rolls.—Make a stiff batter with cold water, work in as much flour as will knead well, and then knead for twenty minutes or half an hour. Make into rolls one-half inch to two inches in thickness, and bake in a hot oven on a grate or baking pan dusted with flour, laying them a little distance apart. Excellent rolls may be made by kneading flour into cold graham, corn-meal, or oatmeal pudding.

Crisps.—Mix graham flour or oatmeal with cold water into a very stiff dough. Roll very thin, and bake in a hot oven. Eat while warm. Excellent for dyspeptics.

Fruit Toast.—Slice and toast cold soft biscuit. Place in a proper dish and pour over the slices hot canned whortleberries, raspberries, or similar fruit, with much juice. Eat with oatmeal crisps. Some cooks soften the toast with hot water before adding the fruit.

Fruit Gems.—Make a batter as for gems. Add a few whortleberries, chopped apples, dates, raisins, or any other fruit desired. Bake in gem pans as directed for gems.

Cocoanut Cake.—With a pint of boiled cracked wheat mix a grated cocoanut, a half pint of cocoanut milk, half a pint of dried currants or other dried berries, a quart of stewed sweet apples or boiled figs, and sufficient wheat meal to make a moderately stiff dough. Bake, in loaves, an hour and a half to two hours.

Fruit Loaf.—One and a half cups of bread crumbs—or soaked graham gems—one cup of wheat meal, one cup of

sugar, two cups of chopped apple, and two-thirds of a cup of currants. Mix thoroughly, and bake till the apples are tender. This may be eaten with or without a dressing.

Cocoanut Cookies.—One cup good wheat meal, one-half cup grated cocoanut, and one-half cup sugar. Rub these thoroughly together, then wet with a scant half cup of water—just enough to make a dough as soft as can readily be worked. Roll out to one-third of an inch, cut into shapes, and bake in a pretty quick oven about fifteen minutes. Some care is required not to bake them too hard.

Oatmeal Pie Crust.—Scald two parts of oatmeal with one part of hot water. Roll thin. It bakes very quickly, so that fruit which requires much cooking must be cooked before making into the pie. This remark, however, applies only to pies which are baked with an upper crust. This crust is very tender, and possesses all the desirable qualities of shortened pie crusts, with none of their deleterious properties.

Cocoanut Pie Crust.—Two cups graham flour, one cup grated cocoanut. Make into a stiff dough with cold water, and knead well. Add one cupful of well-boiled rice. Mix well and roll thin. This crust is very excellent.

Sweet Potato Pudding.—Grate six medium-sized, raw sweet potatoes. Add two quarts of cold sweet cider, one cup of grated cocoanut, and an equal quantity of raisins. Thicken with graham flour, beat the batter well, and bake in a moderate oven.

Cream Pie Crust.—Take equal quantities of graham flour, white flour, and Indian meal; rub evenly together, and wet with very thin sweet cream. It should be rolled thin and baked in an oven as hot as for common pie crust.

Apple Custard Pie.—Grate sweet apples, or a mixture of sweet and sour, if preferred. Add and mix one spoonful of dry flour for each pie. Cover a deep pie plate

with crust, and add the apples. Cover the top with chopped raisins, figs, or dates.

Lemon Pie.—Two cups sweet apple sauce ; two sliced lemons ; one teacup of chopped raisins ; one raw potato, grated ; a very little corn starch and flour. Bake with two crusts after properly mixing.

Oatmeal Pudding.—Sift one part of coarsely ground oatmeal into three or four parts of boiling water, stirring five minutes or until it sets. Cover closely, and put it where it will only simmer for a half hour. Do not stir after it sets, and take it up carefully. It is somewhat improved by cooking three quarters of an hour.

Oatmeal Gruel.—Mix a tablespoonful of oatmeal with a little cold water ; pour on the mixture a quart of boiling water, stirring it well ; let it settle two or three minutes ; then pour it into the pan carefully, leaving the coarser part of the meal at the bottom of the vessel ; set it on the fire and stir it till it boils ; then let it boil half an hour and skim. It is best when cooked in a double boiler.

Preserving Grapes.—Pick carefully the later kinds of grapes. Select such bunches as are perfect, rejecting all upon which there are any bruised grapes, or from which a grape has fallen. Spread them upon shelves in a cool place for a week or two. Then pack them in boxes in sawdust which has recently been thoroughly dried in an oven. Bran which has been well dried may also be used. Dry cotton is employed by some. Keep in a cool place. In this way, grapes may be kept until long after New Year's with ease.

Another method still more efficient is to select perfect bunches, as already directed, and dip the broken end of the stem of each bunch in melted sealing-wax. The bunches may then be wrapped in tissue paper and placed in layers, or hung in a cool place, or they may be packed in sawdust.

To Keep Water Cool.—Ice is almost universally depended upon as a means of cooling drinking water in summer. The free use of iced water is harmful. By making use of the following means, the water may be kept sufficiently cool to answer all the real demands of nature ; in fact, it may be kept nearly at freezing temperature :—

Place between two sheets of thick brown paper, a layer of cotton half an inch thick. Fasten the ends of the sheets together so as to form a roll. Sew in a bottom made of similar material, making it nearly air-tight, if possible. Fill a pitcher with cool water, and cover it with the cylindrical box by inverting it over the pitcher. If the box is kept constantly wet with water, evaporation will go on so rapidly that the water in the pitcher will be kept very cool for a long time.

Water may also be kept cool by placing it in jugs and wrapping them with wet cloths.

How to Make a Filter.—Take a large flower pot or earthen vessel, make a hole one-half inch in diameter in the bottom, and insert in it a sponge. Place in the bottom of the vessel a number of clean stones of sizes varying from that of an egg to an apple. Place upon this a layer of much smaller stones and coarse gravel. Then fill the jar within two inches of the top, with equal parts of pulverized charcoal and sharp sand, well mixed. Place loosely over the top of the jar white flannel cloth, allowing it to form a hollow in the middle of the jar, into which the water can be poured. Secure the edges by tying a stout cord around the outside of the jar. By keeping a suitable vessel under the filter thus made, and supplying rain water when needed, very pure water can be obtained. It can be kept in a cool place in the summer time. It will require to be renewed occasionally by exchanging the old sand and charcoal for fresh. The flannel and sponge must be frequently cleansed.